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Master's Thesis

**Visitors' motivation and attitudes  
toward butterfly trading as souvenirs  
at Bantimurung bulusaraung  
National Park in Indonesia**

인도네시아 Bantimurung bulusaraung 국립공원의  
기념품으로써 나비 거래에 대한 방문객의 동기와 태도

February 2018

Department of Forest Sciences  
Seoul National University  
Forest Environmental Science Major

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# **Visitors' motivation and attitudes toward butterfly trading as souvenirs at Bantimurung bulusaraung National Park in Indonesia**

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Submitting a master's thesis

February 2018

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## **Abstract**

Transformation of the tourism industry into industrial and economic sectors triggers other sectors to grow, for instance, souvenir industry. Increasing number of visitors, however, escalates the demand for souvenirs from local and natural materials, which leads to resource degradation.

The impact of tourism at Bantimurung Nature Recreation Park (NRP) to the resource arises due to visitors heavily buy butterfly souvenirs. The utilization of butterflies as material for souvenirs escalates their exploitation. It occurs to not only unprotected but also protected butterflies. Visitors as main actors affect the tourism sustainability and butterfly's ecosystem. Thus, it is crucial for the Park to establish visitor management to secure tourism including butterfly-trading activities to give social and economic benefits but still maintain environmental sustainability and butterfly ecosystem.

This research has four objectives; 1) to identify visitors' motivation; 2) to figure out deontological status, law obedience, political action, and environmentally attitudes of visitors; 3) to measure souvenir expenditure of visitors and their perception and preference to butterfly souvenirs; 4) to enlighten correlation among those variables.

Data collection for the study was conducted for one month, in October 2017, at Bantimurung NRP, Babul National Park (NP), South Sulawesi Province, Indonesia using on-site survey, observation, and face-to-face interview. The data

from 455 respondents were analyzed using factor analysis, correlation method, and logistic regression.

The result showed that visitors' motivation divided into five groups; challenge and freedom, nature tour, escape from routine, social relationship, and family relationship group. Visitors had high deontological status, law obedience, political action, and environmentally attitude. The visitors perceived highly to the attributes of souvenirs and also had a high preference for the butterfly souvenirs which have conservation attributes. There was a significant correlation among variables of motivation to visit, deontological status, law obedience, political action, and environmentally attitude and perceived and preference of butterfly souvenirs attributes. Repeated visits and characteristics of butterfly such as display quality, value quality, and conservative attribute were found to influence the demand for butterfly souvenirs.

This study enlightened how national park visitor's motivation and their attitudes could affect souvenir-purchasing behavior. The result of this study can be of use for developing visitor management and ecotourism policies in National Parks in Indonesia.

**Keywords:** motivation, deontological status, law obedience, political action, environmentally attitude, butterflies' souvenirs, Bantimurung Bulusaraung National Park, Indonesia

**Student Number:** 2016-22114

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# CHAPTER 1. INTRODUCTION

Tourism is an industry that always experiences rapid development. Tourism can be categorized as a sector that can recover rapidly from the circumstances that often lead to declining world economic condition, such as epidemics disease (Aro, Varti, Schreck, Turtiainen, & Uutela, 2009; Wall, 2006), natural disasters (Carlsen & Hughes, 2008; Faulkner & Vikulov, 2001), terrorism (Korstanje & Clayton, 2012), financial crisis (Alonso-Almeida & Bremser, 2013; Lean & Smyth, 2009) and war (Fleischer & Buccola, 2002; Iles, 2006). The UNWTO (2017) shows how this industry overgrowing, they state that in 1950, there were 25 million tourists globally, and within 30 years, the number of tourists rose to 278 million. The number of travelers has increased years by years, from 2015 to 2016, the number of travelers increased as much as 46 million people, resulting around 1,235 million travelers in 2016.

Along with the rapid increase of tourism sector in the 21<sup>st</sup> century that made the tourism transformed into the world's largest industrial and economic sectors, there is also a rapid development of the handicraft procurement sector. Currently, the handicraft or souvenirs become an inseparable part of the tourism industry (Amin & Bonjar, 2015). Handicrafts or souvenirs perform a vital role in the tourism development (Tjoa & Wagner, 1998), and conversely, the growth of tourism contributes to the increasing of handicrafts or souvenirs' demand (Raymond, 1978).

All kinds of goods or products collected by tourists on their vacation in somewhere categorized as handicrafts or souvenirs. However, based on the definition proposed by the experts, there is a little difference of description between the term of handicraft and souvenir. Handicraft defined as goods that are handmade or made using simple tools or equipment (Healy, 1994; Richard, 2007; UNESCO & ITC, 1997; Yihao & Yuning, 2010) and incorporate a substantial element of craft skill (Healy, 1994). Yihao and Yuning (2010) also added that the handicraft is created artistically involving skills and arts. The word of souvenir itself means the action to remember. Thus, souvenirs are objects that play a role to remind (someone) of something. In this case, something can be goods that a person acquires from a place, festival, event, or from someone (Swanson & Timothy, 2012). Although there is a slight difference in the meaning between the term ‘handicraft’ and ‘souvenir,’ both are strictly related to the tourism. The author prefers to use the term ‘souvenir’ concerning to the butterflies product as a trading commodity because the term ‘souvenir’ is well known or familiar than the term ‘handicraft’ in the Indonesian language.

The vital role of handicraft in the tourism sector is mainly due to souvenirs or handicrafts being identities (Kwon, 2002; Nason, 1984) and typical (Erlina, Hapsari, & Ramasari, 2016; Lukić, Stojanović, Đerčan, Živković, & Živković, 2015) of a tourism destination. Handicraft also acts as a symbol of the place that the tourist visited (Mustafa, 2011). Handicraft even

plays a role in describing the image of a destination (Hengky, 2014; Swanson & Horridge, 2006). As an object that becomes to be a reminder of something, then souvenir or handicraft also will be essential to evoke tourists' memories to the place that they had visited (Swanson & Timothy, 2012). The existence of handicraft also plays a role in increasing the attractiveness (Amin & Bonjar, 2015) and visitation of tourist to visit (Bui & Jolliffe, 2013).

Nowadays, handicraft becomes essential/extreme importance in the tourist experience (AbuElEnain & Yahia, 2015; Hume, 2014). Tourists even compelled the handicrafts as one of the items they want to obtain. Thus, handicrafts are always wanted (Love & Sheldon, 1998; Swanson & Horridge, 2006), hunted (Ko, 2000; Park, 2000), must be purchased or obtained (Swanson & Timothy, 2012; Vadhanasindhu & Yoopetch, 2006), while being a tourist or visiting a tourist destination. Handicraft becomes a primary requirement (Peters, 2011; Timothy, 2005), a valuable souvenir (Mustafa, 2011), pride and personal collection (Lasusa, 2007) of the tourists.

One of the main characteristics of the souvenir or handicraft is that they were made from local materials, and used raw materials from natural resources. Since most of the materials that used in handicraft manufacturing exploited natural resources, UNESCO and ITC (1997) have emphasized that handicrafts' artisan must utilize sustainable resources as raw materials. Unfortunately, despite using sustainable natural resources as the essential ingredients to make handicraft, but in reality, not a few artisans did not pay

attention to the sustainability of the natural resources as raw or primary materials when they made handicraft or souvenir. For instance, the use of copal wood as the main ingredient in making famous wood carvings in Mexico. Using copal wood has led to the depletion of the native copal wood trees (Sanchez-Medina, Corbett, & Toledo-Lopez, 2011). The use of a variety of plant species such as the *Eriocaulaceae*, *Xyridaceae* and *Cyperaceae* families in Central Brazil as handicraft materials had resulted in deterioration of several species population from those family. Consequently, on a regional scale, they had been at risk of extinction status (Schmidt, Figueiredo, & Scariot, 2007). In Colombia, communities used of *Hemiepiphytes* as craft fibers to make souvenirs and sell it to the tourists at the Amacayacu National Park. This activity suspected as one of cause led to decrease of the *hemiepiphytic* population (Vargas & Andel, 2005). In Central Guyana, the overutilization of *Manilkara bidentate* and *Heteropsis flexuosa* as furniture materials had also resulted in a decrease population of those plants. Hence craftsman/artisans have to move to other areas to get plant materials to continue their furniture productions (Hall, 2000 cited in Vargas & Andel, 2005). Another example of using natural resources as handicraft materials that cause damage to natural resources is the use of oak wood, which is the main ingredient for firing pottery handicraft (Klooster, 2002). For animal, trading fur in Kathmandu, Nepal also showed how the tourism threaten the sustainability of resources (Barnes, 1989).

## **1.1. Bantimurung bulusaraung NP and Butterfly**

Similar conditions can also be found in one of the famous natural attractions in South Sulawesi province, namely Bantimurung. Bantimurung Nature Recreation Park (Bantimurung NRP) is one of the natural tourism objects managed by Bantimurung Bulusaraung National Park (Babul NP). It is located in karst Maros-Pangkep, one among the three of karst ecosystem in the world that characterized by karst tower landscape (Badan Lingkungan Hidup Daerah Sulawesi Selatan, 2011). Besides famous for its natural beauty, Bantimurung NRP also famous due to the dissemination of journey report by Wallace (1890) who reported that Bantimurung and another area surrounding have butterflies richness, both in number and species.

Unfortunately, beautiful description by Wallace (1890) related to the butterflies in this area was difficult to find due to the exploitation of butterflies. The local community has exploited the butterflies in the forests and surrounding settlements around the area of Bantimurung NRP. Exploitation of butterflies as a trading commodity, both in the form of preserved and processed into various forms souvenirs, is a vital source of income for the community. Until now, trade of the souvenir that uses butterflies as raw materials has been going on for decades. The butterfly handicraft trading has survived and found to date. Butterflies souvenirs still have many enthusiasts and essential positions in the hearts of visitors.

The sustainability of butterfly is fundamental for Bantimurung Bulusaraung National Park. The protection and preservation of the butterfly became the basis for the appointment of this national park (Menteri Kehutanan, 2004). The butterfly is also used as an icon of the Bantimurung Bulusaraung National Park (Asriady, 2011). Bantimurung Bulusaraung National Park even uses butterflies as their flagship species (Bantimurung-bulusaraung National Park, 2008; Triwin, 2012). Furthermore, Bantimurung Bulusaraung National Park uses the term of ‘the kingdom of the butterfly’ as their slogan (Asriady, 2011; Handayani, 2011; Handayani et al., 2015). Butterflies are also one of the factors that motivate visitors to come to visit Bantimurung NRP.

Although the butterfly is a vital insect for Babul NP, unfortunately, the sustainability of the butterflies’ population has not been a particular concern for the managers, surrounding communities and other stakeholders. However, to fulfill the demand for raw materials to make souvenir, the community exploited butterflies massively and uncontrolled in the Bantimurung Bulusaraung National Park forest area. Exploitation of butterflies is continuing and quite difficult to eradicate until now. Putri (2016b) stated that there are differences in the number of amount and species of butterflies between areas where forests are subjected to the pressure of butterfly catchers compare to areas where forest are not under pressure from the butterfly catchers. Based on that, Putri (2016a) suspects that the exploitation of

butterflies to make souvenir by the community became the main cause of the butterfly population's decline at Bantimurung Bulusaraung National Park. The decreasing butterfly population due to souvenir demand emerge a perturbing circumstance.

However, the presence of butterflies become one of the leading attractions of Bantimurung. The existence of butterflies has become the trademark or uniqueness, which distinguishes Bantimurung with another tourism area in Indonesia, including abroad. Visitors came to this place aims to watch butterflies that are flying freely in nature (butterfly watching).

As a natural destination that relies on the sustainability from the preservation of environmental conditions and butterflies that become the main attraction, the decline in the population of butterflies at Babul NP and surrounding areas should have received particular attention from the manager of Bantimurung Bulusaraung National Park. As a tourism destination, Babul NP is deeply dependent on the uniqueness of their natural resources and environment. Babul NP may be faced considerable competition with other tourist destinations if they do not retain their natural resources. However, a destination that relies on the uniqueness of natural resources will experience a decrease in competitiveness when the destination is damaged, making them no longer attractive to the visitors. Thus, the decline in butterfly populations due to overexploitation to be used as raw material for souvenir threaten not



only the butterflies' sustainability but also the sustainability of tourism in Bantimurung NP.

Putri (2016b) mentions in her private interview with butterfly collectors, in the period 2008 to 2015, they accepted that there was a decreasing number of butterflies that collected by butterfly catchers. In addition, to be able to catch enough butterflies to be exchanged for money in a decent rupiah value, most of the butterfly catcher must go deeper into the forest to catch the butterflies. It shows the tendency of declining butterfly's population. This circumstance not only threatens the livelihood of butterflies souvenir's artisans but probably also threatens the stakeholders who involved in the utilization of butterflies as livelihoods, such as children, teenager, adult, parents, and grandparents, who acted as catchers, gatherers, artisans, and sellers. Therefore, providing specific information and understanding of various factors will support tourism management arrange souvenir trading that secure sustainability of butterflies.

## **1.2. Butterfly trading and tourism.**

The attraction of butterfly invites visitors to visit a tourism area counted quite large, around 40 million tourists visit butterfly houses and butterfly gardens per year (Boppre & Vane-Wright, 2012), this potential market is still growing (Lemelin, 2007). New (2009) stated that butterflies attract people through live exhibits in butterfly houses and garden, and appeal in the wild

nature to the visitors, and as a commodity trading namely a specimen for collectors and a souvenir for the visitors.

Trading butterfly as souvenirs is not something new. Insect trading has a long and complicated history; butterflies trading have begun since post-Renaissance (Boppre & Vane-Wright, 2012). The impact of the souvenir trade on butterflies has been documented several decades earlier as reported by Carvalho and Mielke (1971 cited in Green and Giese (2004) declaring that tourists were suspected as the primary cause of the loss of over 50 million butterflies every year in Brazil due to their demand for butterflies' souvenir. The impact of visitor behavior on the sustainability of butterfly on tourism destination also found in the protected area (Ardahanlioğlu & Özhancı, 2014). It is in line with Wang and Shao (2009) who also reported that an increasing number of tourist and their behavior to consume natural resource at the tourism area caused natural resource degradation. Nevertheless, a right strategy in management can reduce the impact of tourism and alter it to a better condition. A better perspective was suggested by Walpole and Leader-Williams (2002) who recommend the management concentrated on tourism also rather than only focus on the role of biodiversity in ecological concept which is highly cost. They enlightened that the existence of biodiversity attracts visitors to visit the protected area not only generated fund but also can be used to increase public awareness to be more conservationist.

The problem of butterfly trading in Bantimurung NRP is quite massive and complicated. It cannot be denied that the butterfly trading has contributed significantly to the economics of the surrounding community. Therefore, solving this problem is not possible by stopping the butterfly trading activity. The first mechanism is to regulate the trading of butterflies that are considered vulnerable, for example, prioritize the butterfly that protected by law or endemic. It might be easier and has a significant impact on the sustainability of butterfly when management able to stimulate visitors to do not buy butterflies' souvenir that is vulnerable, rather than stopping community to catch and trade the butterflies. However, this option is in line with the goal of ecotourism on the National Park, which is to provide environmental education to the visitors.

### **1.3. Motivation to visit**

Research has validated that visitors as one of threats to the tourism sustainability through their activities (Hadwen, Hill, & Pickering, 2007). Therefore, Juvan and Dolnicar (2016) suggested management to manage the visitors because the visitor was representing promising targets to improve the tourism sustainability. Thus, it is essential for National Park to invite visitors who have environmentally attitude and behavior. In this study, visitors suspected as a primary actor caused the demand for butterflies' souvenir still occurs until now.

In order to manage the visitors, the first thing that important to know is revealing visitors' motivation to visit the destination. Motivation is defined as the direction of behavior (Elliot & Covington, 2001; Rumbaugh et al., 2012). Distinguish visitors' motivation to visit supports management to identify types of visitors and their travel patterns, and for further purposes, such support to develop a product, evaluate service quality, improve the image, and endorse activities (Fodness, 1994). Furthermore, Cochrane (2006) report that Indonesian people were motivated to visit National Park in favor of using the park as a pleasant backdrop for souvenir shopping, eating, and relaxing.

#### **1.4. Visitors' attitudinal**

The second thing that is vital to know in order to manage visitor is recognizing attitude of the visitor. Kim and Weiler (2013) stated that segmenting market using environmentally attitude is an effective and efficient communication strategy approach to educate and communicate to the visitors. Therefore, four-factor concerning the attitude of visitors that considered influence visitors' behavior to the Bantimurung NRP, especially to the butterfly were measured. Namely the level of deontology, respect to the law, political support to the environment, and attitude to the environment. Further, these attitudinal were labeled as deontological status, law obedience, political action and environmentally attitude. These variables were confirmed effect the green purchasing behavior and general environment behavior (Leonidou,

Leonidou, & Kvasova, 2010), and environmental behavior (Leonidou, Coudounaris, Kvasova, & Christodoulides, 2015).

Deontology was used by Chan, Wong, and Leung (2007) to measure the ethical judgment of people, to see the people value their behavior is right or wrong. In the context of deontology, judge right or wrong of making souvenirs using butterflies might result in different perceptions, depend on the visitors' perspective. Garcia-Rosell and Moisander (2007) states that a person's deontology might be different, depend on where he stands, whether he/she is an *anthropocentric*, *non-anthropocentric*, *biocentric*, and *ecocentrism*.

Law obedience status shows the level of obeying the regulation, laws, and rule (Leonidou et al., 2015; Leonidou et al., 2010). In the tourism, visitors' obedience to environmental rules is essential in maintaining environmental sustainability. In this study, measuring the visitors' obedience to the law is an important to preserve the environment, especially the butterflies. As a commodity which is material originated from nature, it is crucial to make rules or regulations that can regulate and secure the butterfly trading from threatening the sustainability of butterflies. The inclusion of species into the protection list can provide benefits such as the preservation of the species and increase the attractiveness to see the species (Ando, 1999)

Bohlen, Schlegelmilch, and Diamantopoulos (1993) highlighted that political action is a desire to engage in sociopolitical to combat environmental

degradation. Participating in activities such as intervene with the media, support environmental pressure groups, lobby political representatives, and boycott companies, in order to combat environmental degradation were used and also approved as items to measure political action (Leonidou et al., 2010). Political action can encourage other people to participate in that activity, for instance, a campaign using blog media with specific factor will influence reader related that factor (Gil De Zúñiga, Puig-I-Abril, & Rojas, 2009).

Visitors who have environmentally attitude is more likely to minimize their behavior impact to the environment such as purchasing ecology friendly product and engage in conservation activity (Leonidou et al., 2015; Leonidou et al., 2010). Despite that, visitor who have highly environmentally attitude do not permanently show environmentally responsible behavior due to internal factors such financial limitation or external factor such sociopolitical changes (Leonidou et al., 2010), and varied depending on environmental issue (general or specific issue) and on-site they visited (Kim & Weiler, 2013).

### **1.5. Perceived and preference to butterflies' souvenir**

Furthermore, it is important to know perceived of visitors related to the importance of souvenir attributes of butterflies' souvenir. The attributes divided into two group, general attribute and conservation attribute. A general attribute such as display quality, value quality, and appeal quality was used to measure perceived of visitors related to the souvenir that they purchased

(Kong & Chang, 2016; Litirell et al., 2016). These variables provided information that can be used to increase attractiveness and magnetism of souvenir to the visitors.

Nevertheless, need to concern that among the butterflies being made souvenirs, there are butterflies that need extraordinary attention because of its conservation aspect. Putri (2016a) found four species protected by law and became material for butterflies' souvenir. Namely *Cethosia myrina*, *Troides haliphron*, *Troides hypolitus*, and *Troides helena*. These four species are protected by Government Regulation No. 7 in 1999 and also categorized as high priority species by Forestry Ministry Regulation No. 57 in 2008. Furthermore, all of *Troides* species which mention previously including *Graphium androcles*, *Papilio blumei*, *Papilio sataspes*, and *Papilio politics* are endemics species that were also made as butterflies' souvenirs (Putri, 2016a).

The second group, conservation attributes comprise four questions, related to the things that considering affect the sustainability of butterflies. This variable requested about the preference of visitor related to the butterflies which are protected by law, rare, endemic/local species, and authenticity/originality of butterfly's body. In the context of conservation, these items indicated the ecology status of butterflies. When the species established to be protected by law that indicated the species are threatened. When the species recognize was rare or difficult to find might indicated their

population is small, limited, or decrease. Rare status due to decreasing population indicate the species in a vulnerable situation and might be extinct due to over-exploitation (Slone, Orsak, & Malver, 1997). Status of endemic or only live in the limited area also might indicate they are vulnerable or threatened when their population in that area were decreased. As commodity trading, status such as protected by law, rare or difficult to find concerning to prestige; endemic concerning to typical and also prestige. These attributes, however, can increase the price and demand.

This study also figures out preference of visitor related to the authenticity/originality of souvenir. The artisan who collected the butterflies from catcher gave different prices according to the species and quality of butterfly. The more complete of the body/part and the more perfect of the color of butterflies caused the higher the price of the butterflies. It made the catcher prefer to catch mature butterfly to get a high price. Catching mature butterfly which is still productive threaten their population in nature. Therefore, it necessary to know the preference of visitors related to this issue. The originality or authenticity of body/part of butterfly were asked to measure, did the visitors only want to buy a perfect butterfly within all the body are complete, and original without modified or not? This question was purposed to see a chance to utilize a broken butterfly, carcass/dead butterfly to be modified and completed by another butterfly so can be used as souvenir material.



## **1.6. Souvenir expenditure and knowledge**

Finally, it is imperative to know the souvenir expenditure of visitors and also the knowledge of visitors related to the regulation of butterfly trading. Kong and Chang (2016) stated that visitors spent their money to purchase souvenirs indicate the satisfaction of visitor related to the destination. The knowledge of visitor related to the regulation is also vital. This information will assist to reveal the phenomena that emerge regarding the relationship between those variables.

Those aforementioned variables considered have relation each other and influence visitors related to the butterflies souvenir. The relation between visitors' motivation to visit and their attitudinal was reported by Wurzinger and Johansson (2016) who found that environmentally attitude and behavior were dissimilar regarding the type and motivations of tourist, the sequence level of environmental attitude and behavior from high to low were eco-tourists, nature tourists, and city tourists. Kim and Weiler (2013) found that visitors' motivation was related to their attitude and behavior to collect fossil. Kil, Holland, and Stein (2014) also reported that attitude of visitor significantly affects their motivations. In this study, it is necessary to know the relationship between motivation to visit and deontology, law obedience, political action, environmentally attitude to reveal which of the motivation is not related to the attitude. This information is useful for management to

ensure that visitor of Bantimurung NRP are visitors who have highly deontology, respect to the regulation, support environment through political action, their attitude friendly to the environment and thus will support the sustainability of butterflies.

Kong and Chang (2016) reported that visitors' motivations correlated to their perceived importance attributes of souvenir. It is essential to know if visitors' motivations correlated to their perceived importance attributes of souvenir, and their preference related to the conservation attributes. Clarifying the correlation will indicate which type of motivation has a relationship to the butterfly attribute, especially the conservation attribute. Management of Bantimurung NRP can employ this information to manage visitors who visit this destination. According to the correlation, management can select appropriate visitor who does not prefer the butterflies' conservation attribute, which is not threatening the sustainability of the butterflies.

Furthermore, it is essential to know the relationship between attitudes of tourist related to their perceived about the attribute of souvenirs. It is needed to reveal, are visitors' deontology, law obedience, political action, environmentally attitude affected visitors perception to the attributes of butterflies souvenirs particularly for their preference to the conservation attribute. Based on the correlation, management can choose what strategy is appropriate to the attitude of visitors. For example, in order to make marketing strategy, it is important to know how the deontology of visitors

influences their assessment to the attributes of butterflies' souvenirs as a trading commodity. To what extent visitors' deontology influence their intention to buy butterflies' souvenirs. Whether their deontology value would disagree to the butterfly trading, accept partially with the requirement, or accept it perfectly.

Finally, it also necessary to reveal relationships among motivation, attitudinal, souvenirs' attribute and souvenir expenditure. Swanson and Horridge (2006) state that motivation to visit influences perceived and preference to the product of souvenirs, product attributes, and store attributes. Kong and Chang (2016) resulted that there is a correlation between the type of motivation to visit of visitors with souvenir shopping. Enlightening the correlation between visiting motivation and souvenir expenditure will help the manager to know which of the motivation type have an economic contribution to the butterflies' souvenirs trading. It is also necessary to reveal that visitors' deontology, law obedience, political action, environmentally attitude, affected the amount of money that visitor spent to purchase butterflies souvenirs. It also required the relationship between perceived and preference of visitor to the souvenirs attribute with souvenir expenditure. This information can help the manager to improve attribute of souvenir that generates the souvenir expenditure of visitors.

## **1.7. Research Objectives**

There are four primary objectives of this research are as follows:

1. Identify visitors' motivation to visit
2. Figure out the deontological status, law obedience, political action, and environmentally attitude of visitors
3. Measuring souvenir expenditure of visitors and their perceived and preferences related to the butterflies' souvenirs attributes
4. Revealing correlation between visitors' motivation, souvenir consumption/expenditure, perceived of souvenirs attributes, and visitors' deontological status, law obedience, political action, and environmentally attitude.

## **1.8. Research Hypotheses**

The research hypotheses of this research are as follows:

H1: Visitors' motivations are related to deontological status, law obedience, political action and environmentally attitude.

H2: Visitors' motivations and perceived and preference to the butterflies souvenirs attributes are related.

H3: Visitors' motivations are related to the butterflies' souvenir expenditure.

H4: Deontological status, law obedience, political action, environmentally attitude and perceived and preference to the butterflies souvenirs attributes are related.

H5: Deontological status, law obedience, political action, environmentally attitude and souvenir expenditure are related.

H6: Visitors' perceived and preference to the butterflies' souvenirs attributes are related to souvenir expenditure.

## CHAPTER 2. METHODOLOGY

### 2.1. The study site

This research conducted in one of the natural attractions located at Bantimurung Bulusaraung National Park (Babul NP), namely Bantimurung Nature Recreation Park. Administratively, Bantimurung Nature Recreation Park (Bantimurung NRP) is located at Kalabbirang Village, Bantimurung sub-district, Maros regency, South Sulawesi Province, Indonesia. The area of the Babul NP encompasses three districts, namely Maros district, Pangkajene dan kepulauan district, and Bone district, South Sulawesi province. Babul NP is located nearly from Makassar (South Sulawesi capital), approximately 40 km or takes a 1-hour drive or around 30 km from the Sultan Hasanuddin international airport.

Babul NP was declared as National Park Conservation area based on Decree of the Minister of Forestry No. 398/Menhut/II/2004 dated October 18, 2004. Babul NP has a total area approximately 43,750 hectares. Geographically, the area is lies between  $119^{\circ} 34' 17''$  -  $119^{\circ} 55' 13''$  EL and between  $4^{\circ} 42' 49''$  -  $5^{\circ} 06' 42''$  SL (Figure 1). There is three type of ecosystem can be found in Babul NP namely the ecosystem of a lower montane forest, the ecosystems of karst, and the ecosystem of lowland forest. The topography of Babul NP consists of mountainous areas whereas characterized by its steep highlands and cliffs. The highest peak in Babul NP is the summit of Bulusaraung Mountain at 1,300 m above the sea level. The

remaining parts of the park consist of hilly areas to flatlands. According to Schmidt and Ferguson's climate classification, Babul NP's climate is classified into three types, namely B, C, and D climate type. Rainy season start from November to April while dry season occurs from July to September.

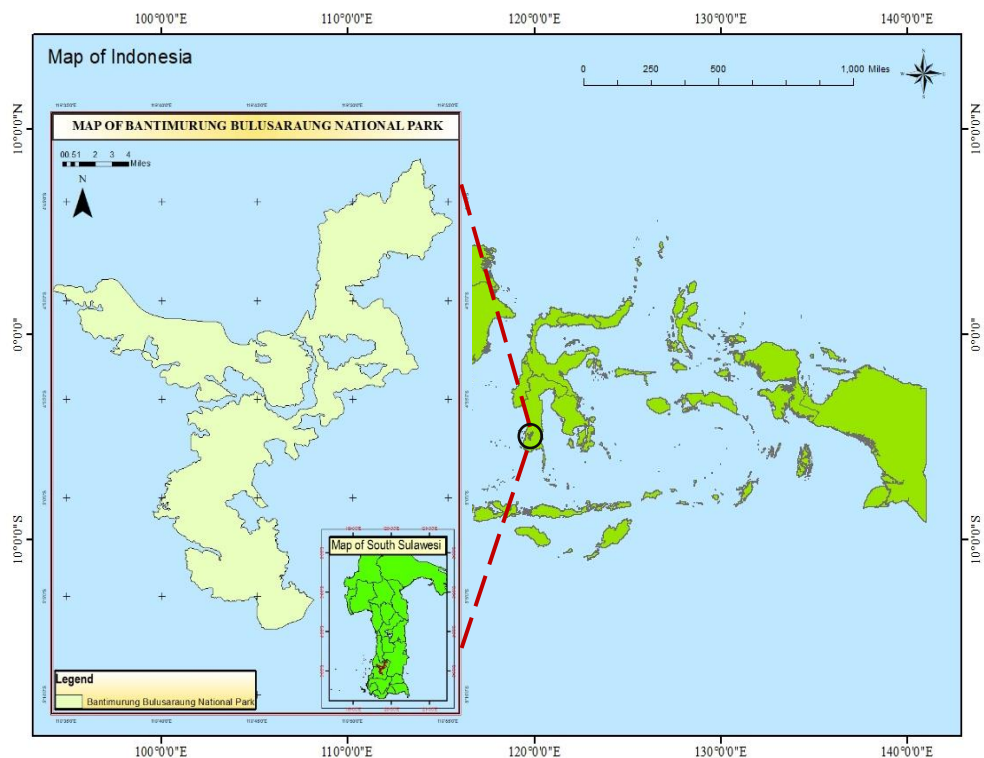


Figure 1. Map of study area

Babul NP is a part of the Maros-Pangkep Karst region that is well-known throughout the world. As a part of karst area, this natural tourism object utilizes the potential of biotic and non-biotic natural resources contained in karst as a tourist attraction. Samodra (2003) stated that the vast limestone in South Sulawesi is forming its type of karst. Karst type of Pangkep-Maros is

different from other places that are shaped Conical Hill Karst. It is characteristics placed to be the second most beautiful karst formations after the karst region that has been selected as a world natural heritage, Halong Bay in Vietnam. Maros-Pangkep Karst is also known as the second largest karst after the karst region in South China (Bantimurung-bulusaraung National Park, 2016).

Babul NP has high and unique biodiversity, Bantimurung-bulusaraung National Park (2015) reports that there are 709 species of plants, and 728 wildlife species comprising 33 species of mammals, 154 bird species, 17 amphibians, 30 reptiles, 165 species of Collembola, Pisces, molluscs, and 300 species of insects among which 226 species of butterflies. Where there are 51 species of wildlife that are protected by law and 153 species are endemic Sulawesi. Vegetation species can be found in Bantimurung NRP such as *Eugenia sp.*, *Vitex sp.*, *Canarium sp.*, *Syzygium sp.*, *Arenga pinnata*, *Dracontomelon dao*, *Garcinia sp.*, *Diospyros sp.*, (Unit KSDA Sulawesi Selatan I, 2000). Besides that vegetation, Bantimurung NRP also has endemic wildlife, such as Sulawesi black monkeys (*Macaca maura*) and Tarsius (*Tarsius fuscus*), Kuskus (*Phalanger ursinus*), reptiles, such as lizard trees, lizards, and various bird species. Another biodiversity that can be found and become the primary pride of Bantimurung NRP is butterflies. The beauty and uniqueness of the butterflies (Waluyo, Sadikin, Gustami, & Whiting, 2005), easy to see domestic wildlife and close to major urban centers (Cochrane,



2006), the natural beauty of karst tower, waterfalls, rivers, and caves attract tourist to visit Babul NP.

## **2.2. Method**

The outline of this study is to identify visitors' motivation to visit; their deontology, law obedience, political action, and environmentally attitude; and visitors perception related to the attribute of butterflies' souvenirs such as value quality, display quality, appeal quality, and conservation attributes; and souvenirs consumption/expenditure. For that purposes, this study follows several stages, namely the preliminary survey, preparation of questionnaire, collecting data, input data, analysis data, and preparation of discussion. This study uses several approaches, namely survey methods, observations, and interviews.

Firstly, the researcher conducted a survey; the survey is a data collection method by interviewing a few people (Black & Champion, 2001). The survey method undertaken as the preliminary survey before the actual research. It was conducted with the aim of collecting preliminary data to obtain a systematic, accurate and factual early description of the butterflies' souvenirs trading at Bantimurung NRP.

Secondly, the step of data collection, this study combined three approaches, namely the observation method, questionnaire and schedule method, and interview methods. Collecting data by observation method was

conducted by direct observation (Nazir, 1988) on trading activities at Bantimurung NRP. The observation method conducted to record the incidents that occur during the trading process between the buyer (in this case the visitors) and the seller. In addition, observation method aims to obtain data from the subject, especially when the subject is not willing to communicate verbally, e.g., because of fear or reluctance or not have enough time, so did not willing to interview. The use of observation method is a technique to make research data complete.

The questionnaire method is a method of collecting data by using questionnaire, which is arranged in detail and complete. In the questionnaire method, the respondent answer and fills the questionnaire by himself (Nazir, 1988). When the respondent only gave the answer to response the interviewer's questions, but the interviewer fills the questionnaire based on respondent's answer, then this method is called the schedule method (Nazir, 1988). The schedule method is also applied in this study because there is a possibility that the respondent prefers to give information by talking directly to the interviewer. Then wrote the respondent's answer on the questionnaire sheet.

Interview method is a method of collecting data by doing a question and answer directly between interviewers and respondents or by face to face (Nazir, 1988). In this study, data collection using interviews were conducted if the interviewer intends to explore the specific issue more deeply about the

butterflies' souvenir but the questions were not available or not on the list of the questionnaire.

### **2.3. Sample**

Respondents were visitors of Bantimurung NRP. Respondents were selected randomly, who were willing to be interviewed or asked for information and opinion. The minimum number of visitors that should be interviewed as respondents refer to the Slovin's formula (Tejada & Punzalan, 2012):

$$n = \frac{N}{1+N (e)^2}$$

n = needed sample size

N = population size

e = margin of error allowed (10%)

The number of visitors who visited Bantimurung NRP is 309.702 peoples in 2016. The level of accuracy used in this study is 95% or by 5% margin error, then the minimum number of respondents to represent the population is 400 respondents.

### **2.4. Instrument**

The primary supporting instrument in this research is a questionnaire. The interview guide was used as an instrument during the interview also being

as a questionnaire that was filled out by visitors. The questionnaire or interview guide has previously passed the testing phase to test its reliability. Testing the questionnaire reliability is performed with the following steps. After observation of the butterflies' souvenir trading activity, the researcher then compiled a list of questions as a draft of the questionnaire according to the conditions of trading activity.

Questions providing in the Indonesian language are endeavored using simple sentence and easily understood. The design of the questionnaire was tested on ten volunteers, who understood the situation of Bantimurung NRP. The preliminary survey is conducted to determine the accuracy of the question and the time required to complete the question. When conducting trials interview, the interviewer record the time needed by volunteers to complete the questionnaire or answer questions. An extended question will be discarded or modified but retain their relevancy. When the test result shows that volunteers need a shorter time to answer all the questions, then it is considered to add more questions that are relevant and appropriate to the research topic. Conducting a preliminary survey of questionnaires by using volunteers who understand the situation of Bantimurung NRP also performed with the aim that the volunteers could provide input on the questionnaire. The questionnaire that has been tested will be used as a tool for this research.

The form of questions was proposed in the shape of semi-open and closed questions. For semi-open questions, respondents can choose the answers that

have been provided in the questionnaire, but they also can give the other answer by writing their answer based on their opinion, such as for the question, what their motivation to buy souvenirs. For closed questions or a fixed-alternative question, where the choice of the answer has been provided, so respondents just choose the answer. This type of questions was submitted in two form, namely checklist (✓) such as questions for gender, education; and the form of a five-point Likert question such as questions for motivation to visit, attributes of souvenirs, and attitude. Using Likert scales to measure such variable in the tourism were suggested by Maddox (1985) due to superior validity. Kong and Chang (2016) stated that questionnaires using checklists and five-point Likert scale method provide answers that have a high degree of validity and reliability. Respondents easily understand the questions, can respond to the question in a short time and does not cause interference due to consuming a lengthy duration.

## **2.5. Questionnaire composition**

The list of questions for visitors listed in the questionnaire categorized into six parts that contain 75 questions or statements.

The first part of the questionnaire related to the topic about the motivation to visit of visitors. It used a five-point Likert scale to measure visitors' motivation. This part consisted 20 statements (Box 1) and placed on the first page of the questionnaire.

Box 1. Motivation to visit (Boxal and Adamowitz, 2002)

1	To strengthen relationships with friends or family
2	To be with my friends or family
3	To do things with other people
4	To be with people with similar interests
5	To get away from everyday routine
6	To relieve my tensions
7	To escape from the pressures of work
8	To challenge my skills and abilities
9	To develop my skills
10	To challenge nature
11	To feel free from society restriction
12	To feel independent
13	To observe the beauty of nature
14	To enjoy the sights, sounds and smells of nature
15	To feel close to nature
16	To find quiet places
17	To be in charge of a situation
18	To obtain a feeling of harmony with nature
19	To be alone
20	To be away from other people

The statements of motivation designed by Boxall and Adamowicz (2002) who used the statement to measure motivations towards wilderness recreation in the system of wilderness parks in the United States. They derived and modified the items of statements from Crandall (1980) and Beard and Ragheb (1983) who developed these items to measure leisure motivations. Kamri and Radam (2013) also had used these statements to measure the visitors' motivation to visit Bako National Park in Malaysia. The purpose of these

statements measure visitors' motivation on wilderness or backcountry, and due to the fact that the study site, Bantimurung NRP, which is located in National Park is natural destination offering backcountry condition, and outdoor activities. Therefore, these statements were considered more appropriate to measure visitors' motivation to visit this destination.

The second part of the questionnaire related to the topic about the attitude of visitors. It used a five-point Likert scale to measure visitors' deontology, law obedience, political action, and environmentally attitude. This part consisted 22 statements (Box 2) and placed on the second page of the questionnaire. The statements of attitude designed by Leonidou et al. (2015) who derived and modified the variable of deontological status from Chan et al. (2007), law obedience from Gaski (1999), political action from Bohlen et al. (1993). Leonidou et al. (2015) used these variables as antecedent factors measured tourist environmental attitude which they derived and modified from Choi and Sirakaya (2016).

Box 2. Attitudinal (Leonidou et al., 2015; Leonidou et al., 2010)

**Deontological status**

- 1 I am interested in conserving the natural resources
- 2 I reduce unnecessary waste
- 3 I try to create and provide a better living environment for future generations
- 4 I am concerned about the environment for my future personal convenience

**Law obedience**

- 5 I try to avoid committing bribery in my transactions
- 6 I show respect for the laws and especially those for the environment
- 7 I abide by the safety laws for the protection of the environment
- 8 I try to avoid companies that use misleading environmental practices

**Political action**

- 9 I often intervene with the media in order to combat environmental degradation
- 10 I support environmental pressure groups in order to combat environmental degradation
- 11 I lobby political representatives to support green issues
- 12 I boycott companies that are not environmentally responsible

**Environmentally attitude**

- 13 Tourism must protect the environment now and for the future
- 14 The diversity of nature must be valued and protected by tourism
- 15 I think that tourism should strengthen efforts for environmental conservation
- 16 Tourism needs to be developed in harmony with the natural environment
- 17 Proper tourism development requires that wildlife and natural habitats be protected at all times
- 18 Tourism development must promote positive environmental ethics among all parties that have a stake in tourism
- 19 Regulatory environmental standards are needed to reduce the negative impacts of tourism development.
- 20 I believe that tourism must improve the environment for future generations
- 21 I believe that the quality of the environment is deteriorating because of tourism
- 22 As a tourist, I would be willing to reduce my consumption to help/protect the environment.



The third part of the questionnaire related to the attributes of butterflies' souvenirs. This part consisted 15 statements (Box 3) and placed on the third page of the questionnaire. It also used a five-point Likert scale to measure the perception and preference of Bantimurung visitors related to the butterflies' souvenirs attributes. This part divided into two groups, general attribute and conservation attribute. The first group, general attribute, number one to eleven, derived and modified from Kong and Chang (2016), and Litirell et al. (2016) and Turner and Reisinger (2001). They used this attribute to see the perceived of the visitors related to the souvenirs that they purchased. The second group, conservation attributes comprise four questions, number twelfth to fifteenth, related to the things that considering affect the sustainability of butterflies.

Box 3. Souvenir Attributes (Kong & Chang, 2016; Litirell et al., 2016; Turner & Reisinger, 2001)

1	Easy to care for and clean
2	The price is appropriate
3	Colors are appealing
4	Design is appealing
5	Easy to pack or carry on a trip
6	Can be displayed in the home
7	Workmanship has high quality
8	It is unique
9	It can be used or worn
10	It can be a good gift
11	The name/logo of Bantimurung is important
12	Souvenirs that are made by a rare species is interesting
13	Souvenirs that are made by protected species is interesting
14	Souvenirs that are made by local/endemic species is interesting
15	Authenticity/originality of butterfly's body or part is important

The fourth part, the questionnaire contains questions concerning tourists demographics to figure out visitors profile such as ethnic, address (district and province), gender, marriage status, ages, education, occupation, and income.

The fifth part, the questionnaire asked questions related to travel characteristic of visitors such as the primary transportation they used to come to Bantimurung NRP, who and how many people accompany them, and how many time they visit Bantimurung NRP.

The last part, the questionnaire contains questions regarding shopping characteristic such as: what the primary motivation of them to buy butterflies' souvenirs, how much money they spent to buy butterflies' souvenirs, and including what their reason if they did not buy butterflies' souvenirs. Moreover, the last, questionnaire also asked the respondent regarding knowledge about the regulation related to the butterflies.

## **2.6. Collecting data**

There is two type of data were collected in this research, that is primary data and secondary data. The primary data collected in the form of quantitative data and qualitative data. Quantitative data is data obtained from the results of questionnaires and interview results. Qualitative data is data obtained from the observation of the butterfly trade activity. The secondary data were collected in this research such as data of the number of tourists

visiting Bantimurung NRP within the last five to ten years, the board announcement related to education to visitors, including brochure, leaflet and board announcement regarding butterflies.

Primary data collection used a survey, observation, interview with a topic relevant to the purpose of research, or by asking respondents to fill the questionnaires, either completed by the respondent or filled with the help of interviewer (schedule method). The survey only conducted at the preliminary stage of the study, then the observation of the butterfly trade activity will be carried out both at the early stage of the research and during of the research study. Observations in the early stages aim to give an idea related to the activities of tourists and sellers in the souvenir trading. The results of these initial observations used to compile the interview materials in the questionnaire. Further observations of the activities of tourists and sellers in the souvenir trading conducted during the research study aimed to add data about the butterfly trade.

Data collection using interview method utilized during the research when interviewer find something interesting and want to ask questions which are not listed in the questionnaire. Interviews conducted by the un-structured and in-depth method. However, the subject of the interview is limited to a variety of issues that are still relevant to the purpose of the study. Conversations during the interview will be recorded and will become additional data, referring to Connelly-Kirch (1982).

Data collection using questionnaire was conducted by randomly distributing questionnaire among groups of visitors, and asked them to fill a questionnaire that was provided. Although the respondents were requested to complete the answer to each question by themselves, in the process, the interviewer still assisted the respondent. Assistance was conducted to anticipate if the respondent (due to various things, e.g., Disability, low level of education) apparently has difficulties to be able to fill the questionnaire. Assistance also facilitates to collect the questionnaires that had been completed by respondents.

Visitors of Bantimurung NRP were sampled randomly at the front of the entrance and inside of Bantimurung NRP. Respondents were selected when they were going out the park and also when they have enjoyed their activities in inside the park. Interviewing visitors were conducted around one month, started from 7<sup>th</sup> until 31<sup>st</sup> October 2017. Sampling was carried out from 09.30 a.m. to 05.00 p.m. A total 455 of questionnaires were completed, exclude around 32 questionnaires were rejected due to not complete.

## CHAPTER 3. RESULT

### 3.1. Trading butterfly as souvenir

Butterflies' souvenirs in Bantimurung NRP are traded in the form of key chains, bracelets, necklaces, frames, and preserved in wrapped in plastic. Years ago butterflies were traded in the form of butterfly preserves in triangular envelopes (Putri, 2016b), then based on observations during the study, no more butterflies were found in triangular envelopes.

In general, the sellers of souvenir grouped into two groups. The first group, called souvenir merchants/store, this seller have kiosks that are located on the outside of the entrance. The existence of this kiosk is legal because it is provided and managed by the management of Bantimurung NRP (Figure 2). The second group is Asongan or street vendor who sells souvenirs by hawking their merchandise in haggling. Asongan is a term derived from Indonesian, which is intended for traders who sell their merchandise by using a small wooden box that has a rope to hang the box to their shoulders. The wooden box is used to display some small and easy-to-carry of butterfly souvenirs, such as key chains, bracelets, necklaces, small frames containing only one butterfly, butterfly wrapped in plastic. Nowadays, using wooden box began to decrease. The street vendor only holds a few small souvenir packages in their hands and kept other souvenirs in their backpacks. Unlike the souvenir sellers who have a store, which is more passive and only waiting for visitors who come to their kiosks, the street vendors are more active. They

peddle their butterflies' souvenirs by walking around the destination area to offer souvenirs directly to the tourists, especially to the place that many visitors available. In addition to selling souvenirs, street vendors also offer guide services to visitors. Based on the results of interviews with some street vendors, they efforts to be a guide to increase the income obtained from work as a guide, as well as a means of camouflage to cover the trading activities. It is also a way to increase the sales volume because visitors who were guided will usually feel respect, and finally buy butterflies' souvenirs.



Figure 2. The store of butterflies' souvenirs

The seller not only advertised various forms of butterflies' souvenirs in Bantimurung NRP. Some sellers have a marketing network to the outside Sulawesi Island; some of them have network marketing to overseas or foreign countries. They sell not only butterflies but also a cocoon and pupa. As

technology advances, based on internet searching results, it appears that today, sellers not only promoted their products through word of mouth and mobile phone but also endorsed their products on commercial websites. Marketing by using the internet will probably further expand the marketing network and can further increase the sales volume.

Increased trade in souvenirs led to an increase in butterfly demand as ingredients of souvenirs. The declining population of local butterflies, and to increase the variety of butterflies to attract buyers, the butterfly artisans purchased butterflies from other regions, islands, and sometimes they imported butterflies from abroad.

In Indonesia, the trade of butterflies in the form of souvenirs occurs not only in Bantimurung NRP, but also in other areas such as Yogyakarta, Malang, Jakarta, Probolinggo, Banyuwangi, and Bali. The butterflies originated from Java, Kalimantan, Sumatra, Sulawesi, and Papua. In some destination such as in Brebi, Probolinggo, seller promoted butterflies not only in the form of souvenirs but also in the form of caterpillars and pupa. Similar with the conditions at Babul NP, based on the results of interviewing to sellers from outside Sulawesi through chatting via Facebook messenger, obtained information that the butterflies they trade are not all resulting from captivity but also derived from nature. They confess that some unscrupulous traders were selling protected butterflies in the black market. The existence of butterfly trading activities that occur among regions, inter-island and even

between countries, should acquire attention because the insect trade that has no control or clear rules could have an impact in the future if not carefully monitored. It will threaten the butterfly populations in areas that were suffering from exploitation. The uncontrolled butterfly trading also emerges the spreading diseases or pests, as well as the spread of alien species (Boppre & Vane-Wright, 2012).

### **3.2. Visitor's Profile**

A total 455 visitors of Bantimurung NRP were selected randomly as respondents. Based on ethnic group, a diversity of visitors who visited the Bantimurung NRP was quite diverse. There were at least 40 types of ethnic group. Table 1 shows that visitors who visited the Bantimurung NRP were dominated by Bugis ethnic (44%,) followed by Makassar (25.5%), Java (9.5%), Toraja (2.6%), and 18.5% from other ethnic. Administratively, they come from 83 districts. Although Bantimurung NRP is located in the Maros district, visitors from Maros was only 15.4%, relatively low compared to 33.6% of visitors from Makassar. However, based on the origin of the Province, South Sulawesi accounted as the most prominent address of the visitor, approximately 76.5%.



Table 1. Ethnic and address of respondent

Characteristic	n	Percentage
<b>Ethnic</b>		
Bugis	200	44.0
Makassar	116	25.5
Jawa	43	9.5
Toraja	12	2.6
Other	84	18.5
<b>District</b>		
Makassar	153	33.6
Maros	70	15.4
Gowa	31	6.8
Wajo	17	3.7
Other	184	40.4
<b>Province</b>		
Sulawesi Selatan	348	76.5
Jawa Barat	16	3.5
Jawa Timur	16	3.5
Kalimantan Timur	13	2.9
Sulawesi Barat	8	1.8
Other	54	11.9

According to the gender of respondents, 43.5% were male, and 56.5% were female. According to marriage status, around 63.5% of respondents were single, and 36.5% have married. The majority of respondents were in the 20 - 39 years age range (58.9%). At least 25% of respondents were in the age range below 20 years, and only 8.6% in the age range above 50 years (table 2).

Table 2. Gender, marriage status and ages of visitor

Characteristic	n	Percentage
<b>Gender</b>		
Male	198	43.5
Female	257	56.5
<b>Marriage status</b>		
Not married	289	63.5
Married	166	36.5
<b>Ages</b>		
< 20 years	114	25.1
20 - 29 years	199	43.7
30 - 39 years	69	15.2
40 - 49 years	34	7.5
> 50 years	39	8.6

Respondent's education was quite diverse, 31.6% were undergraduate, 24.6% were students in the university, 22.0% were high school graduated, and only 4.4% were master or Ph.D. (table 3).

Table 3. Education of visitors

Characteristic	n	Percentage
<b>Education</b>		
None	1	0.2
Elementary graduated	2	0.4
Student in Middle school	8	1.8
Middle school graduated	6	1.3
Student in High school	62	13.6
High school graduated	100	22.0
Student in university	112	24.6
Bachelor	144	31.6
Master/PhD	20	4.4

According to the occupation, the majority of respondents were students (41.3%). Then followed by employee (17.7%), civil servant (14.7%), and self-employed (13.0%). A total of 47.7% of respondents were in the monthly salary group less than Rp1000,000. While the number of respondents who were in the range of monthly salary Rp1000,000-Rp3100,000 and above Rp3100,000 quite equal, that is 24.6% and 27.7%, respectively (table 4).

Table 4. Occupation and salary of visitors

Characteristic	n	Percentage
<b>Occupation</b>		
Student	188	41.3
Employee	78	17.1
Civil Servant	67	14.7
Self-employed	59	13.0
Housewife	25	5.5
Pensioner	5	1.1
Farmer	2	0.4
Other	31	6.8
<b>Salary</b>		
< Rp1000,000	217	47.7
Rp1000,000-3100,000	112	24.6
>Rp3100,000	126	27.7

### 3.3. Travel Characteristic

This section discussed travel characteristics of respondents as shown in Table 5. Respondents visited Bantimurung NRP used main transportation such as Motorcycle (38.2%) and Private car (30.3%). Only 10.5% of the

respondents used the bus and 9% used public transportation, and 8.8% of other respondents used a rental car.

Table 5. Main transportation of visitors

Characteristic	n	percentage
<b>Main transportation</b>		
Motorcycle	174	38.2
Private car	138	30.3
Rent car	40	8.8
Public transportation	41	9.0
Airplane	14	3.1
Bus	48	10.5

According to the accompanying type, approximately 38.0% of respondents visited Bantimurung NRP with their friends, and 33.0% came with their family (table 6). Only 3.7% came alone and 7.5% accompanied by their spouses. Based on the number of people who accompany the respondent, most respondents came with 2-9 people (50.6%) or came with 10-49 people (28.3%). Even exist respondent visited Bantimurung NRP with more than 50 people (10.1%). Only 1.8% of respondent came alone, and 9.2% came with one person.

Table 6. Types and amount of accompanies of visitors

Characteristic	n	percentage
<b>Types of accompanies</b>		
Alone	17	3.7
Friends	173	38.0
Family	150	33.0
Couple	34	7.5
Colleague	52	11.4
Tour package	29	6.4
<b>Amount of accompanies</b>		
Nobody	8	1.8
One people	42	9.2
2 - 4 peoples	114	25.1
5 - 9 peoples	116	25.5
10 - 19 peoples	73	16.0
20 - 49 peoples	56	12.3
> 50 peoples	46	10.1

Relating to the number of a repeated visit of visitors, the new visitors or visitors who visited the Bantimurung NRP as the first time are equal with those visitors visited more than five times, i.e., 31.0% and 33.2%, respectively (table 6). Similarly, the number of visitors who visited Bantimurung NRP two times (12.5%) is equal compared to the number of visitors who visited this destination three times (12.1%).

Table 7. Repeat visit of visitors

Characteristic	n	percentage
<b>Repeat visit</b>		
One time	141	31.0
Two times	57	12.5
Three times	55	12.1
Four times	28	6.2
Five times	23	5.1
More than five times	151	33.2

### 3.4. Shopping Characteristic

From a total of 455 respondents, half of them (50.8%) claimed to buy butterflies' souvenirs and 49.2% percent claimed that they never buy butterflies' souvenirs. Respondents purchased souvenirs with various kinds of motivation. Table 8 shows the reason or motivation of visitors to buy butterflies' souvenirs. The majority of respondents (51.5%) purchased butterflies' souvenirs to gift to others people as souvenirs. The second biggest reason of the respondents purchased souvenirs because they wanted butterflies' souvenirs on their trip (22.9%). Around 10.4% of respondents purchased butterflies' souvenirs because they thought butterflies' souvenir was only available at Bantimurung NRP. Only 0.4% of respondents purchased butterflies' souvenirs because they like to shop.

Table 8. Motivation to buy butterflies' souvenirs

No	Main motivation to buy butterfly's handicraft	n	Percentage
1	Gift/Souvenirs for other people	119	51.5
2	Wanted a souvenir of the trip	53	22.9
3	Only available at Bantimurung NRP	24	10.4
4	Want to use/functional needs	14	6.1
5	Something to do/I feel bored	13	5.6
6	Friends/relatives took me shopping	2	0.9
7	Like to shop	1	0.4
8	Others	5	2.2
	Total	231	100

The amount of spending money (Table 9) seems that the majority of respondents (69.2%) spent their money to purchase butterflies' souvenirs less than Rp100,000. About 29.9% spent their money around Rp100,000-Rp500,000. Only 0.9% purchased butterfly souvenirs more than Rp500,000.

Table 9. Visitors' souvenir expenditure

No	Spend of money to buy souvenir	n	Percent
1	< Rp50,000	107	46.3
2	Rp51,000 - Rp100,000	53	22.9
3	Rp101,000 - Rp500,000	69	29.9
4	> Rp501,000	2	0.9
	Total	231	100

The respondent who never purchased butterflies' souvenirs conveyed some reasons why they did not buy butterflies' souvenirs (Table 10). A total of 27.2% of respondents did not buy butterflies' souvenirs because they did not have the intention to shop. Some of the respondents did not buy for environmental and legal reasons such as affect the environment/nature

(21.9%), they did not want to hurt butterfly / decreasing population (2.2%), and they thought they would break the law (2.7%) if they purchased butterflies' souvenir. Some respondents claimed they did not buy because they did not appropriate with attributes of butterflies' souvenirs such as too expensive (12.9%), less attractive (12.5%), and they did not like the look or the model of butterflies' souvenirs (3.6%). However, some respondents did not buy because they already have butterflies' souvenirs; they stated that they have butterflies' souvenirs because someone gave to them, or there were members of his family who had displayed butterflies' souvenirs in their home. Moreover, as many as 1.8% of respondents claimed did not buy butterflies' souvenirs because they had not seen souvenirs. Thus, they planned to purchase souvenir when they left this destination.

Table 10. Reason of visitors do not buy butterflies souvenirs

No	Reason did not buy butterfly's souvenirs	n	Percent
1	No intention/don't want buy	61	27.2
2	Affect the environment/nature	49	21.9
3	Too expensive	29	12.9
4	Less attractive	28	12.5
5	I already have	22	9.8
6	Do not like the look or the model	8	3.6
7	Violating the law	6	2.7
8	I do not want to hurt butterfly/decreasing population	5	2.2
9	I can find in other places	4	1.8
10	I will buy souvenirs when I come home later/want to see first	4	1.8
11	Other	8	3.6
	Total	224	100



Furthermore, respondents were asked two questions about the regulation of butterfly. Do they know about the regulation regarding the prohibition to catch a protected butterfly and the prohibition to buy protected butterfly?

The results can be seen in table 11. As many as 73.8% of respondents admitted that they did not know the existence of regulation to catch protected butterflies. Similarly, as much as 80.7% of respondents claimed did not know if there are rules that prohibit people from buying protected butterflies.

Table 11. Visitors' knowledge about the law

Items	Knowledge			
	Yes, I know		don't know	
	n	%	n	%
Knowledge that the law prohibits catch butterflies <i>Troides</i> , etc	119	26.2	336	73.8
Knowledge that the law prohibits buy butterflies <i>Troides</i> , etc	88	19.3	367	80.7

### 3.5. Motivation to visit

Respondents were asked by twenty items statement to indicate their most important motive to visit Bantimurung NRP. Table 12 result shows the percentage level of respondents' agreement to these statements. Most of the respondents were agree to the overall of items except to six statements that are in further analysis using factor analysis grouped as a challenge and freedom motivation.

Table 12. Percentage of visitors' motives to visit

	Items of statement	Agreements				
		Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
1	To strengthen relationships with friends or family	0.66	0.88	7.47	47.03	43.96
2	To be with my friends or family	0.66	0.88	5.27	46.81	46.37
3	To do things with other people	2.20	6.15	27.25	41.98	22.42
4	To be with people of similar interests	2.86	6.37	29.89	40.88	20.00
5	To get away from everyday routine	11.21	27.91	19.34	24.62	16.92
6	To relieve my tensions	1.32	3.30	6.81	45.71	42.86
7	To escape from the pressures of work	2.20	9.89	18.90	40.22	28.79
8	To challenge my skills and abilities	12.75	29.01	35.82	16.04	6.37
9	To develop my skills	9.67	23.52	36.70	22.42	7.69
10	To challenge nature	1.98	7.25	22.42	39.12	29.23
11	To feel free from society restriction	11.65	28.57	29.67	23.52	6.59
12	To feel independent	10.33	21.54	34.07	22.20	11.87
13	To observe the beauty of nature	0.66	0.88	5.05	38.02	55.38
14	To enjoy the sights, sounds and smells of nature	0.22	0.66	5.27	40.44	53.41
15	To feel close to nature	0.22	0.88	6.81	43.74	48.35
16	To find quiet places	6.37	12.97	36.04	30.55	14.07
17	To be in charge of a situation	4.62	10.55	35.82	37.58	11.43
18	To obtain a feeling of harmony with nature	0.44	3.96	18.68	48.79	28.13
19	To be alone	16.04	27.91	31.87	18.46	5.71
20	To be away from other people	24.18	36.04	22.86	12.75	4.18

Respondents indicate that they disagree and strongly disagree to the statements: to be away from other people; to be alone; to challenge my skills and abilities; to feel free from society restriction; to get away from everyday routine; and to feel independent.

Furthermore, all 20 items of the statement were analyzed using exploratory factor analysis followed by varimax orthogonal rotation to figure out visitors' motives in visiting Bantimurung NRP. Extracting motivation statement by removing variables with eigenvalue under 1.0 and factor loading under 0.50. From 20 items of the statement, 17 items meet the requirement and resulting five major motivations factor. The Cronbach alpha was employed to measure reliability or internal consistency of the items. The items, their factor loadings, and their Cronbach alpha are shown in table 13.

Once the factor is formed which shaped five factors, then the factors were given the appropriate name or identity. Giving the identity is based on their collective subjects recognized through the items of statements, according to the words, expressions, and sentences in the questionnaire (Kamri & Radam, 2013). Given the name of the factors follows the term that had been used by the previous researcher, Boxall and Adamowicz (2002), and Kamri and Radam (2013). These five factors were called as a challenge and freedom, nature tour, escape from routine, social relationship and family relationship.

Table 13. Refining items of motivation to visit

Items	Factors				
	Challenge & freedom	Nature tour	Escape from routine	Social relationship	Family relationship
To feel independent	0.759				
To challenge my skills and abilities	0.749				
To develop my skills	0.736				
To feel free from society restriction	0.709				
To be away from other people	0.622				
To be alone	0.593				
To enjoy the sights, sounds and smells of nature		0.825			
To feel close to nature		0.787			
To observe the beauty of nature		0.761			
To obtain a feeling of harmony with nature		0.614			
To get away from everyday routine			0.747		
To escape from the pressures of work			0.739		
To relieve my tensions			0.615		
To do things with other people				0.828	
To be with people of similar interests				0.773	
To strengthen relationships with friends or family					0.876
To be with my friends or family					0.769
Eigen value	3.018	2.640	1.958	1.577	1.561
% of variance	17.750	15.528	11.519	9.279	9.181
Cronbach alpha	0.811	0.776	0.630	0.677	0.704

Based on Component Transformation Matrix, which shows value more than 0.6, indicate that all five groups that have been shaped are reliable because they have high correlation value between before rotation and after rotation.

### **3.6. Attributes of Souvenirs**

Concerning attributes of butterflies' souvenirs, respondents were asked fifteen item statements to indicate their perceived and preference related to the souvenir attributes. Table 14 shows the percentage of level agreement of respondents related to attributes of souvenirs. The result shows that most of the respondent agreed and strongly agreed with the overall statements. It indicates respondents have a positive response to the overall attributes. It saves to conclude the respondents accepted that attributes of souvenirs are good, appropriate to their need and preference. It also shows the respondents have interest or preference to purchase souvenirs that are made by protected butterfly, rare species, endemic and also require souvenirs that are made by authentic/original butterfly without modification or assembly by other butterfly's part.

Table 14. Visitors' perceived and preferences to the souvenirs

Items of statement	Agreements				
	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
1 Easy to care for and clean	3.74	6.15	25.27	45.27	19.56
2 The price is appropriate	4.40	9.67	36.70	37.58	11.65
3 Colors are appealing	2.20	2.20	16.04	48.35	31.21
4 Design is appealing	3.30	3.08	18.68	48.57	26.37
5 Easy to pack or carry on a trip	3.74	4.62	23.08	48.57	20.00
6 Can be displayed in the home	3.52	4.18	11.87	47.69	32.75
7 Workmanship has high quality	3.74	2.86	23.96	45.49	23.96
8 It is unique	4.18	3.08	15.38	44.84	32.53
9 It can be used or worn	5.05	7.47	27.69	39.12	20.66
10 It can be as a good gift	4.84	2.20	11.87	43.74	37.36
11 The name/logo of Bantimurung is important	2.20	3.30	14.95	38.90	40.66
12 Souvenirs that is made by a rare species is interesting	8.57	8.57	17.36	38.24	27.25
13 Souvenirs that are made by protected species is interesting	11.43	9.89	19.12	33.19	26.37
14 Souvenirs that are made by local species is interesting	5.93	5.27	23.52	39.56	25.71
15 Authenticity/originality of butterfly's body or part is important	3.96	2.86	13.19	40.00	40.00

Furthermore, all item of statements related attributes were analyzed using exploratory factor analysis followed by varimax orthogonal rotation to figure out factors of attributes of butterflies' souvenir. Extracting attributes of butterfly's souvenirs statement by removing variables with eigenvalue under 1.0 and factor loading under 0.50. From 15 items of the statement, 13 items meet the requirement and resulting four major attributes of butterflies' factor. The Cronbach alpha was employed to measure reliability or internal consistency of the items. The items, their factor loadings, and their Cronbach alpha are shown in table 15.

Table 15. Refining items of the souvenirs' attributes

Items	Factors			
	Display quality	Conservation attribute	Value quality	Appeal quality
Easy to pack or carry on a trip	0.788			
Colors are appealing	0.756			
Can be displayed in the home	0.720			
Design is appealing	0.717			
Souvenirs that is made by protected species is interesting		0.837		
Souvenirs that are made by local species is interesting		0.751		
Souvenirs that is made by a rare species is interesting		0.750		
Authenticity/originality of butterfly's body or part is important		0.641		
It can be used or worn			0.797	
It is unique			0.677	
Workmanship has high quality			0.529	
The price is appropriate				0.786
Easy to care for and clean				0.749
eigen value	3.048	2.646	1.865	1.703
% of variance	23.449	20.356	14.349	13.101
Cronbach alpha	0.809	0.814	0.830	0.714

Once the factor is formed which shaped four factors, then the factors were given the appropriate name or identity. Giving the identity is based on their collective subjects recognized through the items of statements, according to the words, expressions, and sentences in the questionnaire (Kamri & Radam, 2013). Given the name of the factors follows the term that had been used by the previous researcher. These four factors named as display quality, value quality, appeal quality and conservation attributes.

### **3.7. Attitude of tourists**

Concerning attitude, respondents were asked 22 item statements to indicate their level of agreement. Table 16 shows the percentage of respondents' agreement related their deontological status, law obedience, political action, and environmentally attitude. The overall result shows the most of respondents agreed and strongly agreed with the statements except for the statement mention that the environmental quality is deteriorating due to tourism. Around 37,8% of respondents believe that tourism does not damage the environment quality. However, based on the overall result that shown in table 16, it saves to conclude that respondents positively have high deontological status, law obedience, political action, and environmentally attitude.

Furthermore, all twelve items of the statement were analyzed using exploratory factor analysis followed by varimax orthogonal rotation to figure out visitors' attitude. Extracting those statements by removing variables with eigenvalue under 1.0 and factor loading under 0.50. From 12 items of the statement, 11 items meet the requirement and resulting three major attitudes equal to Leonidou et al. (2015). The Cronbach alpha was employed to measure reliability or internal consistency of the items. The items, their factor loadings, and their Cronbach alpha are shown in table 17.



Table 16. Visitors' agreement to the attitudinal

Items of statement	Agreements				
	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
I am interested in conserving the natural resources	1.10	1.10	12.09	45.49	40.22
I reduce unnecessary waste	2.64	7.69	21.76	43.74	24.18
I try to create and provide a better living environment for future generations	1.32	2.42	17.36	42.20	36.70
I am concerned about the environment for my future personal convenience	2.42	4.62	22.20	39.34	31.43
I try to avoid committing bribery in my transactions	7.47	9.01	24.40	33.85	25.27
I show respect for the laws and especially those for the environment	0.44	1.54	10.33	44.62	43.08
I abide by the safety laws for the protection of the environment	0.44	1.54	9.45	39.12	49.45
I try to avoid companies that use misleading environmental practices	1.76	4.62	20.00	38.68	34.95
I often intervene with the media in order to combat environmental degradation	5.27	9.23	35.60	32.09	17.80
I support environmental pressure groups in order to combat environmental degradation	2.20	4.18	16.26	39.56	37.80
I lobby political representatives to support green issues	4.40	6.15	27.91	37.80	23.74
I boycott companies that are not environmentally responsible	3.52	6.15	23.74	37.80	28.79
Tourism must protect the environment now and for the future	0.66	1.10	5.71	32.53	60.00
The diversity of nature must be valued and protected by tourism	0.22	0.66	5.93	32.97	60.22
I think that tourism should strengthen efforts for environmental conservation	0.88	0.88	7.47	36.04	54.73
Tourism needs to be developed in harmony with the natural environment	0.44	1.32	8.57	42.86	46.81
Proper tourism development requires that wildlife and natural habitats be protected at all times	1.10	0.88	10.99	45.27	41.76
Tourism development must promote positive environmental ethics among all parties that have a stake in tourism	0.44	1.54	14.51	41.10	42.42
Regulatory environmental standards are needed to reduce the negative impacts of tourism development.	0.44	2.64	12.97	41.76	42.20
I believe that tourism must improve the environment for future generations	0.44	0.88	10.55	44.40	43.74
I believe that the quality of the environment is deteriorating because of tourism	12.09	25.71	27.91	21.98	12.31
As a tourist, I would be willing to reduce my consumption to help/protect the environment.	2.64	6.59	29.45	38.02	23.30

Table 17. Refining items of attitudinal

Items	Law obedienc e	Component	
		Deontological status	Political action
I show respect for the laws and especially those for the environment	0.730		
I abide by the safety laws for the protection of the environment	0.722		
I try to avoid committing bribery in my transactions	0.639		
I try to avoid companies that use misleading environmental practices	0.563		
I try to create and provide a better living environment for future generations		0.794	
I am interested in conserving the natural resources		0.788	
I reduce unnecessary waste		0.581	
I support environmental pressure groups in order to combat environmental degradation			0.713
I lobby political representatives to support green issues			0.680
I often intervene with the media in order to combat environmental degradation			0.635
I boycott companies that are not environmentally responsible			0.631
eigen value	2.224	2.109	2.024
% of variance	20.217	19.171	18.396
Cronbach alpha	0.689	0.733	0.676

Once the factor is formed which shaped three factors, then the factors were given the appropriate name or identity. Giving the identity is based on their collective subjects recognized through the items of statements, according to the words, expressions, and sentences in the questionnaire (Kamri & Radam, 2013). Given the name of the factors follows the term that had been used by the previous researcher. These three factors named as a deontological status, law obedience, and political action. Moreover,

environmentally attitude variables were tested by the Cronbach alpha to measure reliability or internal consistency and resulting 0.805 Cronbach alpha value.

### **3.8. Result of Hypotheses**

Four major variables were analyzed in this research, namely visitors' motivation; deontological status, law obedience, political action and environmentally attitude; perceived and preferences to the butterflies' souvenir attributes; and souvenir expenditure. All of four major variables were analyzed by employed a correlation analysis method to analyze correlation among those variables. One can use multiple possible methods, but correlation analyses method was chosen due to it is easy to interpret. Six hypotheses were tested in this study if one or more item of four major variables have significant correlation in the hypothesis test, and then that hypothesis will be accepted. The result of hypotheses' test among four major variables is explained below.

The first hypothesis predicted that visitors' motivations are correlated to their deontological status, law obedience, political action and environmentally attitude. Table 18 showed the relation among five motivations type of visitors to visit Bantimurung NRP with their deontology, law obedience, political action, and attitude. Four motivations namely nature tour, escape from routine, social relationship and family relationship

significantly correlated to deontological status, law obedience, political action and environmentally attitude. Only one motivation has a different significant correlation with attitudinal. The challenge and freedom motivation have a significant correlation to deontological status, and political action, but not significantly correlated to law obedience and environmentally attitude. Therefore, it evidently that motivation to visit of the visitor was related to deontological status, law obedience, political action and environmentally attitude. Based on the result, it concludes that the first hypothesis was accepted.

Table 18. Correlation of motivations and attitudinal

		Motivation to visit				
		Challenge & freedom	Nature tour	Escape from routine	Social relationship	Family relationship
Deontological status	Correlation Coefficient	<b>.097*</b>	<b>.338**</b>	<b>.162**</b>	<b>.282**</b>	<b>.278**</b>
	Sig. (2- tailed)	0.038	0.000	0.001	0.000	0.000
Law obedience	Correlation Coefficient	0.091	<b>.312**</b>	<b>.154**</b>	<b>.257**</b>	<b>.189**</b>
	Sig. (2- tailed)	n.s.	0.000	0.001	0.000	0.000
Political action	Correlation Coefficient	<b>.240**</b>	<b>.279**</b>	<b>.241**</b>	<b>.283**</b>	<b>.251**</b>
	Sig. (2- tailed)	0.000	0.000	0.000	0.000	0.000
Environmentally attitude	Correlation Coefficient	0.084	<b>.427**</b>	<b>.281**</b>	<b>.251**</b>	<b>.272**</b>
	Sig. (2- tailed)	n.s.	0.000	0.000	0.000	0.000

The second hypothesis predicted that visitors' motivations are correlated to their perceived and preference to the butterflies' souvenir attributes. Table

19 showed the relation among five motivations type of visitors to visit Bantimurung NRP to their perceived and preference to the butterflies' souvenir attributes. Based on correlation analyses result in table 19 shows that most of the motivations to visit of visitors have a significant correlation to the four type of butterflies' souvenirs attributes. Only the escape from routine motivation, which has a significant correlation to appeal and display quality attributes but not significantly correlated to the value quality and conservation attributes. Thus, it evidently that motivation to visit of the visitor was related to perceive and preference to the butterflies' souvenir attributes. Based on the result, it concludes that the second hypothesis was accepted.

Table 19. Correlation of motivations and souvenir attributes

		Motivation to visit				
		Challenge excursion	Nature tour	Escape from routine	Social relationship	Family relationship
Appeal quality	Correlation Coefficient	<b>.196**</b>	<b>.177**</b>	<b>.111*</b>	<b>.184**</b>	<b>.202**</b>
	Sig. (2-tailed)	0.000	0.000	0.018	0.000	0.000
Display quality	Correlation Coefficient	<b>.162**</b>	<b>.363**</b>	<b>.167**</b>	<b>.253**</b>	<b>.279**</b>
	Sig. (2-tailed)	0.001	0.000	0.000	0.000	0.000
Value quality	Correlation Coefficient	<b>.215**</b>	<b>.298**</b>	0.073	<b>.240**</b>	<b>.314**</b>
	Sig. (2-tailed)	0.000	0.000	n.s.	0.000	0.000
Conservation	Correlation Coefficient	<b>.214**</b>	<b>.139**</b>	0.072	<b>.180**</b>	<b>.144**</b>
	Sig. (2-tailed)	0.000	0.003	n.s.	0.000	0.002

The third hypothesis predicted that visitors' motivation is correlated to their expenditure to buy butterflies' souvenir (table 20). Based on correlation analyses result in table 20 shows that all of the motivations to visit of visitors not significantly correlated to the butterflies' souvenir expenditure. Thus, the third hypothesis was rejected, it evidently that motivation to visit of the visitor was not related to the butterflies' souvenir expenditure.

Table 20. Correlation of motivations and souvenir expenditure

		Motivations to visit				
		Challenge and freedom	Nature tour	Escape from routine	Social relationship	Family relationship
Souvenir consumption	Correlation Coefficient	0.039	-0.047	-0.013	0.042	-0.010
	Sig. (2-tailed)	n.s.	n.s.	n.s.	n.s.	n.s.

The fourth hypothesis predicted that deontological status, law obedience, political action and environmentally attitude are correlated to perceived, preferences to the four type of butterflies' souvenir attributes. Based on correlation analyses result in table 21 shows that different attitude shaped differently perceive and preference related to the various type of butterflies' souvenir attributes. Political action, and environmentally attitude significantly correlated to the all of type butterflies' souvenirs attributes. Deontological status significantly correlated to the appeal, display, and value quality attributes but do not have a significant correlation with conservation attribute. Law obedience only has a significant correlation with display and

value quality attributes but do not have a significant correlation with appeal quality and conservation attributes. Therefore, it concludes that deontological status, law obedience, political action and environmentally attitude were related to perceiving, preferences to the butterflies' souvenir attributes. Based on the result, it concludes that the fourth hypothesis was accepted.

Table 21. Correlation of attitudinal and souvenir attributes

Attitudinal					
		Deontological status	Law obedience	Political action	Environmentally attitude
Appeal quality	Correlation Coefficient	<b>.120*</b>	0.007	<b>.119*</b>	<b>.105*</b>
	Sig. (2-tailed)	0.011	n.s.	0.011	0.025
Display quality	Correlation Coefficient	<b>.166**</b>	<b>.191**</b>	<b>.187**</b>	<b>.238**</b>
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
Value quality	Correlation Coefficient	<b>.170**</b>	<b>.108*</b>	<b>.151**</b>	<b>.153**</b>
	Sig. (2-tailed)	0.000	0.021	0.001	0.001
Conservation attribute	Correlation Coefficient	0.071	0.045	<b>.113*</b>	<b>.126**</b>
	Sig. (2-tailed)	n.s.	n.s.	0.015	0.007

The fifth hypothesis predicted that deontological status, law obedience, political action and environmentally attitude are correlated to the butterflies' souvenir expenditure. Based on correlation analyses result in table 22 shows that there is no significant correlation between two major variables. Thus, the fifth hypothesis was rejected, it evidently that deontological status, law obedience, political action and environmentally attitude was not related to the butterflies' souvenir expenditure.

Table 22. Correlation of attitudinal and souvenir expenditures

		Attitudinal			
		Deontological	Law obedience	Political action	Environmentally attitude
Souvenir expenditure	Correlation Coefficient	-0.053	-0.083	-0.001	0.023
	Sig. (2-tailed)	n.s.	n.s.	n.s.	n.s.

Finally, the sixth hypothesis predicted that perceived and preferences to the butterflies' souvenir attributes are correlated to the expenditure to buy butterflies' souvenir (table 23). Correlation analyses result in table 18 are similar with all result, which is involved expenditure variable. The result also shows that perceived and preferences to the butterflies' souvenir attributes was not significantly correlated to the butterflies' souvenir expenditure. Therefore, it can be concluded that the sixth hypothesis was rejected.

Table 23. Correlation of souvenir expenditure and souvenir attributes

		Attributes of souvenir			
		Appeal quality	Display quality	Value quality	Conservation attribute
Souvenir expenditure	Correlation Coefficient	-0.090	-0.093	-.159*	0.015
	Sig. (2-tailed)	n.s.	n.s.	0.015	n.s.



Moreover, the analysis using logistic regression was conducted to determine which variables that influence the decision of visitors to buy butterflies' souvenir. Logistic regression is a regression model to predict the dependent variable in the form of a binary variable (in this study: buy or not buy) using independent variables data. The preliminary equation includes all variables that are expected to have a relationship with visitors decide to buy or not the butterflies' souvenirs. To get a final model for the analysis, the initial model was modified by dropping the variables, which has no significance for the model.

The result of data analysis (Table 24) shows that there is three variable of attributes (display quality, conservation attribute, and value quality), and one variable namely repeats visit has a significant correlation to the regression formula so that variables can be included in the logistic regression equation. Based on the four variables, it can be determined the regression equation as follows:

$$\text{Ln } P/1-P = -0.877 + 0.262 \text{ Repeat visit} + 0.396 \text{ Display quality} + 0.457 \\ \text{Conservation quality} + 0.61 \text{ Value quality}$$

Table 24. Variables that influence decision to buy souvenir

	B	S.E.	Wald	Exp(B)
Repeat visit	0.262	0.05	27.208	1.299
Display quality	0.396	0.111	12.629	1.485
Conservation quality	0.457	0.111	16.922	1.579
Value quality	0.610	0.115	28.103	1.841
Constant	-0.877	0.197	19.868	0.416
Summary statistic				
Number of observation used		455		
-2 Log likelihood		549.063		
Hosmer and Lemeshow test ( $X^2$ , df, $p$ -value)		7.667, 8, 0.467		
Pseudo $R^2$ (Nagelkerke $R^2$ )		21.90		
Percentage classified correctly		65.3%		

Although only four variables have significant in the equation, it does not mean other variables do not influence the decision of visitors to buy or not buy the butterflies' souvenirs.

## CHAPTER 4. DISCUSSION

### 4.1. Visitors' motivation

According to the result by factor analysis, visitors' motivation to visit Babul NP divided into five type of motivations, namely challenge and freedom, nature tour, escape from routine, social relationship and family relationship. For the first group, challenge excursion is a visitor who comes to Bantimurung NRP because they want to feel independent, to feel free from society restriction, to be away from other people and to be alone. In addition, this visitor also needs a challenge activity so that they can develop their skill and ability.

For the second group, nature tour, this group have primary motivation to come because they want to enjoy the sights, sounds and smells of nature; to observe the beauty of nature, and they want to feel close to nature. Bantimurung can promote their cliff scenic beauty and facilitate visitor to enjoy Mammalia attraction such *Macaca*, and *Tarsius* and promote their big butterfly captivity.

For the third group, escape from routine, this type of group request activity whereas they can feel get away from their everyday routine or feel situation whereas making them sense escape from their pressures of work. They also want a condition where they can relieve their tension.

For the group related to relationship, in the previous research, who used the same item, for instance, Boxall and Adamowicz (2002), and Kamri and Radam (2013), found a motivation related relationship of the visitors as one group, namely social relationship. However, based on factor analysis, relationship motivation in this research divided into two group, namely social relationship and family relationship. This result corresponds to Crompton (1979) who stated that motivation could be divided into two groups, kinship relation, and social relation. Distinguishing the group into two group also confirmed by Kim and Lee (2000) who stated that family integrity and social interdependence as a different motivation. The existence of two types of relationship motivation found in Bantimurung NRP' visitors due to many visitors who came with a group of family from the villages has preference relating to the place and activity.

The intention to travel with the family within a family atmosphere caused this visitor type chose an open place in nature. They are not interested in renting a shelter in Bantimurung NRP location. They also bring their food, and sometimes only bring raw food material, so sometimes they cooked in the area. A different condition found on visitors who came with friends or colleagues; they travel with the aim to meet colleagues and to do an activity with other people. They rented a shelter and requested facility so they can do their activities together.

## **4.2. Visitors' motivation and butterflies' souvenir**

Based on correlation analysis, show that only visitors within motivation to escape from routine does not have a significant correlation with conservation attributes. In another word, four type of motivation has a preference to souvenirs that are made by protected species, endemic, a rare species, and have authenticity/originality of body or part. However, it can affect the butterflies' conservation because most of the visitors within motivation to visit related to challenge and freedom, nature tour, family relationship and social relationship have a preference to buy butterflies' souvenir that has conservation attributes. Considering almost types of motivation to visit have the interest to buy the souvenirs that have conservation attributes, then it will be better to reveal whether this condition becomes a threat to the preservation of butterflies in Babul NP. Therefore, further analysis by using correlation method employed to see the correlation between other variables. Further analysis is performed to analyze the relationship between motivation to visit with deontological status, law obedience, political action, and environmentally attitude to enlighten this problem.

### **4.3. Visitors' motivation and attitudes**

According to the response of respondent to the questions related to their deontological status, law obedience, political action, and environmentally attitude, the overall result shows that respondents positively do agree with the statements of those variables. It saves to conclude that visitors had high deontology; will obey the law; will participate in political action against environmental damage, and their attitude reflecting environmentally friendly attitude. Moreover, further analysis using correlation method was used to reveal the relationship between five groups of motivation to visit with deontological status, law obedience, political action, and environmentally attitude. The result shows that all the variables have a significant correlation with each other, except challenge and freedom' motivation, which has a significant correlation with deontological status and political action but does not have a significant correlation with law obedience, and environmental attitude.

A condition where visitors of Bantimurung NRP had high deontology, law obedience, political action, environmentally attitude, and these attitudes were found significantly correlated to their motivation to visit, indicate that visitors of Bantimurung NRP can be considered as visitors who support the sustainability of butterfly. This situation supports the effort of preserving butterflies and can be used as a foundation to arrange strategy in order to protect butterflies priority. For instance, by making rules about the prohibition

of some species of butterflies and informing visitors about it, will make visitors who have high deontology, law obedience, political action, and environmentally attitude will be selective in buying butterfly souvenirs.

#### **4.4. Attitudes and butterflies' souvenir**

Leonidou et al. (2015) reported that deontological status, law obedience, political action positively influence environmentally attitude, and furthermore these variables effects are conducive to eco-friendly behavior. Using correlation analysis, we found that deontological status, law obedience, and political action have a significant correlation with environmentally attitude, the value of correlation are 0.485, 0.505, and 0.580, respectively. These values of correlation among four variables categorized as middle level. Visitors with high deontological status, law obedience, and political action will have a better environmentally attitude.

Moreover, further analysis using correlation method was used to reveal relationships between deontological status, law obedience, political action, and environmentally attitude with three of souvenirs attributes. The result shows that all the variables have significant correlation each other. The result of correlation analysis shows that deontological status, law obedience, political action, and environmentally attitude have a significant correlation with display quality, value quality, and appeal quality. The significant correlation among these variables indicates that visitors of Bantimurung NRP

who have deontological status, law obedience, political action, and environmentally attitude, perceived that butterflies souvenirs appropriate to their need and preferences.

Furthermore, further analysis using correlation method shows that political action and environmentally attitude have a significant correlation with conservation attribute but deontological status and law obedience do not have a significant correlation with conservation attributes. It shows that even though visitors have political action and environmentally attitude, they still wanted a souvenir that is made by protected species, endemic, a rare species, and have authenticity/originality of body or part. Conversely, visitors who have deontological status and law obedience do not have a preference with a souvenir that is made by protected species, endemic, a rare species, and have authenticity/originality of body or part. Visitors with deontological status, in context of ecology, according to Garcia-Rosell and Moisander (2007), are people who have a principle that human has moral obligation to protect all values including faunae, flora, and their ecosystem. Hence, visitors with deontological status can be understood ones that do not want a souvenir that is made by protected species, endemic, and a rare species. They also do not require souvenir that used perfect butterfly within all the body are complete, and original without modified, or in another word, the whole body of the butterfly was perfect, complete, and authentic/original because never been modified. Similarly, visitors with law obedience are visitors who obey the



law, and rules, so they also do not want butterflies' souvenirs that are made by protected and endemic species.

The emergence of significant correlation between visitors who have political action and environmentally attitude and perceived conservation attributes is very surprising. Visitors with political action are visitors who support or participate to combat environmental damage. Similarly, visitors with environmentally attitude are visitors who have the effort to reduce their negative impacts and contribute to environmental protection. Typically, visitors who have political action and environmentally attitude will not have a preference to the butterflies' souvenirs that are made by protected species, endemic, a rare species, and have authenticity/originality of body or part.

This circumstance, however, based on observation and communication with visitors show that there is some fact made visitors prefer souvenirs with conservation attributes. Visitors conveyed that they got information that butterflies' souvenirs come from butterfly farms and not from the natural environment. They also got information that sellers used carcass/dead butterflies from nature. It is made visitors tolerate the butterflies trading because they think is more useful to use the carcass of butterflies as souvenirs rather than let the carcass of butterflies became a soil/humus. It is also emerging visitors to think that although souvenirs are made by protected butterflies, and endemic but from captivity or the butterflies' carcass, using

that species as souvenirs does not a problem because it does not decrease the population of butterflies.

Furthermore, related to the knowledge of butterflies rules/law for protected species by law, as many as 73.8% of respondents admitted not knowing the existence of a ruler that prohibit catching protected butterflies. Similarly, with the prohibition of buying, as much as 80.7% of respondents claimed do not know if there is a rule that prohibits buyers buy protected butterflies. In addition, based on observation, we found that announcement to visitors related to the environment only such as do not litter, do not smoke, etc. Unfortunately, we did not find announcement related to preserving of butterflies. However, knowledge is essential variables that influence environmentally behavior. Knowledge influenced the decision process of consumers (Laroche, Bergeron, & Barbaro-Forleo, 2001), and furthermore, knowledge related ecological can be used as a predictor about the environmentally behavior(Vining & Ebreo, 2016).

Furthermore, in case of developing the Bantimurung NRP as a tourism destination through increasing visitors based on visitors' motivation, Babul NP should be careful to arrange visitors. Among five of the types of motivation, challenge and freedom motivation to visit should be the ones of the greatest concern. This motivation has a highest significant correlation to the souvenirs that have conservation attributes compare to other motivation. In another word, this type of visitors' motivation prefers to buy butterflies'

souvenirs that are made by protected species, endemic, a rare species and have authenticity/originality of body or part. Moreover, challenge and freedom motivation do not have a significant correlation with law obedience and environmentally attitude. Thus, they also might will break the rule even though they know there is a law that prohibits buying some species of butterfly.

#### **4.5. Shopping expenditure**

The result of correlation analysis using correlation method among shopping expenditure with visitors' motivation, deontological status, law obedience, political action, and environmentally attitude, shows that no variables have a significant correlation.

In case of perceived and preference to the attributes of souvenirs, only value quality has a significant correlation to the shopping expenditure. It corresponds with Kong and Chang (2016) who found that there is a correlation between shopping expenditure with motivation to visit and souvenirs attributes. They found that value quality and display quality significantly correlated with souvenir expenditure. This study only found value quality has a significant correlation to the shopping expenditure, however, Abbruzzo, Brida, and Scuderi (2014) reported that visitors' expenditure has a direct link only to three primary variables such as place of stay, accommodation type, and length of stay.

## **CHAPTER 5. CONCLUSION & RECOMMENDATION**

According to motivation to visit of Babul NP's visitors, their motivation can be divided into five groups, namely challenge and freedom, escape from routine, nature tour, social relationship and family relationship. Furthermore, measuring of visitors' deontological status, law obedience, political action, and environmentally attitude show the visitors have high value. However, half of the visitors convey that they bought butterflies' souvenirs. Most of their expenditure to buy butterflies souvenirs below Rp.100.000. The high number of visitors who bought butterflies' souvenir in line with their acceptance toward the butterfly attribute. From the 15 items of questions related to the attributes of butterfly souvenirs, respondents mostly agree that souvenirs' display quality, value quality, and appeal quality have high-value quality. A large number of buyers and their interest especially on butterflies with conservation attributes undoubtedly has an impact, provides not only economic benefits but also threatens environmental sustainability, especially butterflies. This threat is further compounded because most of the visitors did not know about the prohibition to catch and buy some species of butterflies. Additionally, visitors got incorrect information thereby providing a loose tolerance to the butterfly trading and might influence their behavior and preferences related to the butterflies' souvenirs. Therefore, as a national park,

Bantimurung bulusaraung NP should apply ecotourism function that not only prioritizes the tourism aspect but also provide environmental education for visitors.

Trading of butterflies' souvenir started several years ago, involving many stakeholders, and become the main attraction for visitors. Therefore, the problem of butterfly trade is quite long and complicated. Solving this problem is not possible by stopping the butterfly trading activity. To reduce the negative impacts, it is necessary to make careful and planned arrangements.

Initial steps start by identifying the species of butterflies which are in need of immediate protection, which grouped as a priority species, for example, based on by protected by law, the level of endemicity, and consideration of the population in nature. Next, make the regulation based on the priority species. Regulations are made later informed to Babul NP's visitors in the form of announcement, leaflets, banners, etc. Given the large species variety of butterflies, the species that grouped as the priority for protection should publicize in detail, including the Latin name and local name. The priority species are needed to be displayed in pictures or photos to make it easier for visitors to recognize the butterflies' species. The presence of photographs or images is expected to trigger visitors with high levels of political action to help campaign the butterfly trade arrangement because they will blow up on social media when some visitors or sellers broke the rules. Given deontology value of visitors at a high level, it is necessary to educate

the visitor by displaying detailed information of the priority species. The information, for instance, the functions and benefits of the butterfly in nature, and their habitat conditions, or in any information that presented might shape the deontological value of visitors.

The high preference of visitors to the originality and authenticity of butterfly souvenirs should also receive attention. The Babul NP's management is expected to encourage visitors to buy butterflies which some of part or body comes from other butterflies. Management should be capable of educating and convincing the visitors that the use of partially damaged butterflies that is refined using other butterfly parts derived from carcass might reduce the harvesting of productive butterflies in nature, and encourage catchers and artisan to pick up and utilize a carcass of butterfly in making souvenirs.

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## Appendix

Dear Sir/Madam:

We are conducting an academic survey regarding your motivation and attitude related to the use of butterfly as handicraft at Bantimurung NRP. Your comments are very important for this academic research. We assured your anonymity and confidentiality of your answers and an analysis would be restricted to an aggregated level to prevent your identity. There are no right or wrong answers to the questions, please feel free to answer. Thank you very much

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Fajri Ansari*

### ❖ What motivated you to travel to Bantimurung NRP?

Please mark on your level of agreement (1 to 5) with the following statements.

No.	Questions	Strongly disagree	Strongly agree
1	To strengthen relationships with friends or family	----1-----2-----3-----4-----5----	
2	To be with my friends or family	----1-----2-----3-----4-----5----	
3	To do things with other people	----1-----2-----3-----4-----5----	
4	To be with people of similar interests	----1-----2-----3-----4-----5----	
5	To get away from everyday routine	----1-----2-----3-----4-----5----	
6	To relieve my tensions	----1-----2-----3-----4-----5----	
7	To escape from the pressures of work	----1-----2-----3-----4-----5----	
8	To challenge my skills and abilities	----1-----2-----3-----4-----5----	
9	To develop my skills	----1-----2-----3-----4-----5----	
10	To challenge nature	----1-----2-----3-----4-----5----	
11	To feel free from society restriction	----1-----2-----3-----4-----5----	
12	To feel independent	----1-----2-----3-----4-----5----	
13	To observe the beauty of nature	----1-----2-----3-----4-----5----	
14	To enjoy the sights, sounds and smells of nature	----1-----2-----3-----4-----5----	
15	To feel close to nature	----1-----2-----3-----4-----5----	
16	To find quiet places	----1-----2-----3-----4-----5----	
17	To be in charge of a situation	----1-----2-----3-----4-----5----	
18	To obtain a feeling of harmony with nature	----1-----2-----3-----4-----5----	
19	To be alone	----1-----2-----3-----4-----5----	
20	To be away from other people	----1-----2-----3-----4-----5----	

❖ **What is your attitude related to the following statement?**

**Please mark on your level of agreement (1 to 5) with the following statements.**

No.	Questions	Strongly disagree	Strongly agree
1	I am interested in conserving the natural resources	---1---2---3---4---5---	
2	I reduce unnecessary waste	---1---2---3---4---5---	
3	I try to create and provide a better living environment for future generations	---1---2---3---4---5---	
4	I am concerned about the environment for my future personal convenience	---1---2---3---4---5---	
5	I try to avoid committing bribery in my transactions	---1---2---3---4---5---	
6	I show respect for the laws and especially those for the environment	---1---2---3---4---5---	
7	I abide by the safety laws for the protection of the environment	---1---2---3---4---5---	
8	I try to avoid companies that use misleading environmental practices	---1---2---3---4---5---	
9	I often intervene with the media in order to combat environmental degradation	---1---2---3---4---5---	
10	I support environmental pressure groups in order to combat environmental degradation	---1---2---3---4---5---	
11	I lobby political representatives to support green issues	---1---2---3---4---5---	
12	I boycott companies that are not environmentally responsible	---1---2---3---4---5---	
13	Tourism must protect the environment now and for the future	---1---2---3---4---5---	
14	The diversity of nature must be valued and protected by tourism	---1---2---3---4---5---	
15	I think that tourism should strengthen efforts for environmental conservation	---1---2---3---4---5---	
16	Tourism needs to be developed in harmony with the natural environment	---1---2---3---4---5---	
17	Proper tourism development requires that wildlife and natural habitats be protected at all times	---1---2---3---4---5---	
18	Tourism development must promote positive environmental ethics among all parties that have a stake in tourism.	---1---2---3---4---5---	
19	Regulatory environmental standards are needed to reduce the negative impacts of tourism development.	---1---2---3---4---5---	
20	I believe that tourism must improve the environment for future generations	---1---2---3---4---5---	
21	I believe that the quality of the environment is deteriorating because of tourism	---1---2---3---4---5---	
22	As a tourist, I would be willing to reduce my consumption to help/protect the environment.	---1---2---3---4---5---	

❖ **What is your opinion about butterfly's handicraft?**

**Please mark on your level of agreement (1 to 5) with the following statements.**

No.	Questions	Strongly disagree	Strongly agree
1	Easy to care and clean	---1---2---3---4---5---	
2	The price is appropriate	---1---2---3---4---5---	
3	Colors are appealing	---1---2---3---4---5---	
4	Design is appealing	---1---2---3---4---5---	
5	Easy to pack or carry on a trip	---1---2---3---4---5---	
6	Can be displayed in the home	---1---2---3---4---5---	
7	Workmanship has high quality	---1---2---3---4---5---	
8	It is unique	---1---2---3---4---5---	
9	It can be used or worn	---1---2---3---4---5---	
10	It can be as a good gift	---1---2---3---4---5---	
11	The name/logo of Bantimurung is important	---1---2---3---4---5---	
12	Souvenirs that is made by a rarely species is interesting	---1---2---3---4---5---	
13	Souvenirs that is made by protected species is interesting	---1---2---3---4---5---	
14	Souvenirs that is made by local/endemic species is interesting	---1---2---3---4---5---	
15	Authenticity/originality of butterfly's body or part is important	---1---2---3---4---5---	

❖ **Please answer the following questions.**

- 1) Ethnic :
- 2) Address :  
Sub district :  
District/Province :
- 3) Sex : ☐ Male ☐ Female
- 4) Status : ☐ Married ☐ Not Married
- 5) Age : .....years
- 6) Your education :  

☐ Do not have  
☐ Elementary school graduate  
☐ Student in Middle school  
☐ Middle school graduate  
☐ Student in High school

☐ High School graduate  
☐ in college/university  
☐ Bachelor  
☐ Master/Doctor
- 7) Your occupation :

- |  |  |                                    |
|--|--|------------------------------------|
| <input type="checkbox"/> Student         | <input type="checkbox"/> Civil Servant | <input type="checkbox"/> Farmer    |
| <input type="checkbox"/> Private company | <input type="checkbox"/> Housewife     | <input type="checkbox"/> Pensioner |
| <input type="checkbox"/> Self-employed   | <input type="checkbox"/> Others_____   |                                    |

- 8) Your salary/month:  
☐ < Rp1000.000    ☐ Rp.1.000.000 to Rp3.100.000    ☐ >Rp3.100.000
- 9) What is main transportation do you use to go to Bantimurung NRP?  
☐ Motorcycle    ☐ Private Car    ☐ Rent car  
☐ Public transportation    ☐ Airplane    ☐ Bus
- 10) Who accompanies your traveling?  
☐ Alone    ☐ Friends    ☐ Family and children  
☐ Couples    ☐ College    ☐ Tour packages
- 11) How many people in total have come with you? (.....)
- 12) How many times have you visited Bantimurung NP?  
☐ 1<sup>st</sup>    ☐ 3<sup>rd</sup>    ☐ 5<sup>th</sup>  
☐ 2<sup>nd</sup>    ☐ 4<sup>th</sup>    ☐ More than 5
- 13) Did you buy butterfly's souvenirs?  
☐ Yes, I did    ☐ No, I did not
- 14) What is your main motivation to buy butterfly's handicraft?  
☐ Something to do/I feel bored    ☐ Gift/Souvenirs for other people  
☐ Wanted a souvenir of the trip    ☐ Like to shop  
☐ Friends/relatives took me shopping    ☐ Lower prices/save money  
☐ Only available at Bantimurung NRP    ☐ Want to use/functional needs  
☐ Others.....
- 15) Approximately, how many Rupiah did you spend to buy butterfly souvenirs? Rp .....
- 16) If you did not buy butterfly's souvenirs, why you didn't?  
☐ Less attractive  
☐ Do not like the look or the model  
☐ Too expensive  
☐ I can find in other places  
☐ Affect the environment/nature  
☐ Violating the law  
☐ I already have  
☐ Others.....
- 17) Do you know that catch butterflies *Troides haliphron*, *T. helena*, *T. hypolitus*, and *Cethosia myrina* are prohibited by the law?  
☐ Yes, I know    ☐ No, I do not know
- 18) Do you know that buy butterflies *Troides haliphron*, *T. helena*, *T. hypolitus*, and *Cethosia myrina* are prohibited by the law?  
☐ Yes, I know    ☐ No, I do not know

## Abstract (in Korean)

### 인도네시아 Bantimurung bulusaraung 국립공원의 기념품으로써 나비 거래에 대한 방문객의 동기와 태도

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관광산업의 산업 및 경제부문으로의 전환은 기념품 산업과 같은 다른 산업의 성장을 유발한다. 하지만 관광객의 증가는 지역 기념품 및 자연 소재의 기념품에 대한 수요를 증가시키고 자원의 손상을 초래한다.

Bantimurung 자연휴양공원(NRP)에서 관광 산업이 자연자원에 미치는 영향은 방문객들의 나비 기념품 구매로 인하여 발생한다. 나비를 재료로 하는 기념품은 나비 종이 착취되는 현상을 초래하며, 이는 보호 종으로 지정되지 않은 나비 종과 보호 종으로 지정된 나비 종 모두에게 발생한다. 관광객은 관광의 지속 가능성과 나비 생태계에 영향을 미치는 주요 행위자이다. 따라서 국립공원은 사회 및 경제적 혜택을 제공함과 동시에 환경적 지속가능성 및 나비 생태계의 보전을 위하여 나비거래 활동 및 관광산업 위한 방문객 관리가 필요하다.

이 연구는 네 가지 목적을 가진다; 1) 방문자의 동기를 확인하고, 2) 방문자의 의무론적 지위, 법적 복종, 정치적 지위 및 환경적 태도를 파악하고, 3) 방문자의 기념품 구매를 위한 지출 및 나비 기념품에 대한 인식과 선호도를 측정하여, 4) 측정된 변수들 사이의 상관관계를 밝히는 것이다.

연구를 위한 데이터 수집은 2017년 10월 인도네시아 남부 술라웨시 주 Babul 국립공원 내 Bantimurung 자연휴양공원(Bantimurung NRP)에서 현장 조사, 관찰 및 직접대면 인터뷰를

통해 1개월 동안 수행되었다. 응답자 455명의 응답자료에 대하여 요인분석, 상관분석 및 로지스틱 회귀분석을 실시하였다.

연구를 통하여 방문자의 구매 동기가 5개 집단(‘도전과 자유’, ‘자연관광’, ‘일상에서의 탈출’, ‘사회적 관계’, ‘가족 관계’)으로 구분되는 것을 확인하였다. 방문자는 높은 수준의 의무론적 지위, 법적 순종, 정치적 행동 및 환경적 태도를 나타내었다. 방문자들은 기념품의 속성에 대해 높은 수준의 인식을 갖고 있었고, 보전 가치를 지닌 나비 기념품을 선호하였다. 방문 동기, 의무론적 지위, 법적 순종, 정치적 행동, 환경적 태도, 나비 기념품의 속성에 대한 인식 및 선호도 간에 유의한 상관관계를 확인하였다. 방문자의 반복 방문과 전시, 가치, 보전 속성을 포함하는 나비의 특성은 나비 기념품 수요에 영향을 미치는 것으로 확인되었다.

이 연구는 국립공원 방문자의 동기와 태도가 방문자의 기념품 구매 행동에 어떻게 영향을 미칠 수 있는지를 조명하였다. 연구 결과는 인도네시아의 국립공원의 방문자 관리 및 생태관광 정책을 개발에 기여할 것으로 기대한다.

**키워드:** Bantimurung bulusaraung 국립공원의, 인도네시아, 기념품  
으로써 나비, 여행 동기, 책임있는 태도

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